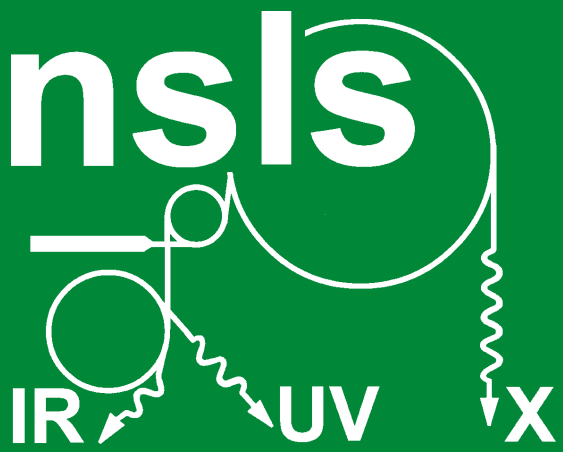

National Synchrotron Light Source

Users' Guide

Rev. 7 (August 2000)

Brookhaven National Laboratory
Upton, New York 11973-5000

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Users' Guide

August 2000

Seventh Edition

Designed and edited by
Mary Anne Corwin
NSLS User Administrator

National Synchrotron Light Source
Brookhaven National Laboratory, Brookhaven Science Associates
Upton, New York 11973-5000

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Foreword

This Guide has been prepared as a supplement to the NSLS Environment, Safety and Health Orientation. It is intended to acquaint users with the experimental floor at the National Synchrotron Light Source and to assist scientists and researchers in performing experiments in a safe manner.

Contained within this guide are sections outlining procedures to be followed in performing experiments, user obligations, check-in and check-out procedures, pertinent BNL policies, and the various Environment, Safety and Health issues which must be addressed. The last section details user services and amenities, the key responsibilities of resource personnel, and visitor information. The inside back cover is a quick list of phone extensions, pager numbers, fax numbers, and building and room numbers for key BNL and NSLS personnel.

A comment about websites contained in this guide: The NSLS website is currently undergoing extensive redevelopment. The website addresses contained in this publication are valid as of January 2000. Should you find that a website address is no longer valid, go to the NSLS Home Page at www.nsls.bnl.gov and use the search function to find the information you require.

We hope you find this guide useful in addressing any questions you may have about the use of the NSLS facility. Comments or suggestions about this publication may be addressed to Mary Anne Corwin in the NSLS User Administration Office (corwin@bnl.gov or 631-344-7114).

Acknowledgments

I wish to extend my appreciation to the many NSLS and BNL staff members who took time to scrutinize the extensive amount of information contained in this guide to ensure accuracy, consistency and continuity.

Thanks to Andrew Ackerman, John Aloi, Ilan Ben-Zvi, Michael Buckley, Jim Desmond, Steven Ehrlich, Nicholas Gmür, Michael Hart, Richard Heese, Steve Hulbert, Liz Hicks, Erik Johnson, John Keane, Mike Kelly, Samuel Krinsky, Herb Langenbach, John Smith, Frank Terrano, Chris Weilandics, and Marty Woodle for providing the most up-to-date information concerning policies, procedures, and staff contacts.

Thanks to Eva Rothman for providing a solid foundation for this revision (that is, *the Fifth Edition*) and for her revisions and comments concerning training issues.

Special thanks to Bob Casey for coordinating the comments of several staff members and for his review and revision of various sections of this edition of the NSLS Users' Guide.

Mary Anne Corwin
NSLS User Administrator

Acronyms

ALARA	as low as reasonably achievable
AP	Allocation Panel
ATF	Accelerator Test Facility
BERA	Brookhaven Employees Recreation Association
BLOSA	Beamline Operations Safety Awareness
BNL	Brookhaven National Laboratory
BSA	Brookhaven Science Associates
CIAC	Computer Incident Advisory Capabilities
DOE	Department of Energy
EAP	Employee Assistance Program
ERC	Experimental Review Coordinator
ESH	Environment, Safety and Health
eV	electronvolt
EXAFS	extended x-ray absorption fine structure
FSD	Financial Services Division
GeV	gigaelectronvolt
GUOC	General User Oversight Committee
HP	Hewlett Packard
IDEC	Insertion Device Executive Committee
ILR	Intra-Laboratory Requisitions
IRB	Institutional Review Board
keV	kilo-electronvolt
LIRR	Long Island Rail Road
MeV	Mega-electronvolt
MOTD	message of the day
mrem	millirem
MSDS	Material Safety Data Sheet
NCSU	North Carolina State University
NSLS	National Synchrotron Light Source
OP CO	Operations Coordinator
ORA	Office of Research Administration, BNL
PC	personal computer
PPM	Property Management Division
PRT	Participating Research Team
PSP	Proposal Study Panel
RCRA	Resource, Conservation & Recovery Act
SAA	Satellite Accumulation Area
SAF	Safety Approval Form
SBMS	Standards Based Management System
SPIG	Special Interest Group
SUNY	State University of New York
TCP	transmission control protocol
TCP/IP	transmission control protocol/internet protocol
TFCU	Teachers Federal Credit Union
UEC	Users' Executive Committee
VUV	vacuum ultraviolet
Web-Req	web-based requisition form

Section 1
Introduction

The History of Brookhaven National Laboratory

Brookhaven National Laboratory (BNL) is a multi-program laboratory that carries out basic and applied research in the physical, chemical, biological, medical, and environmental sciences and in selected energy technologies. Established in 1947 on the site that served as Camp Upton during World Wars I and II, BNL is now operated by Brookhaven Science Associates (BSA) under contract with the U.S. Department of Energy. BSA is a partnership between the State University of New York at Stony Brook and Battelle Memorial Institute. At Brookhaven, the resources of academia and the Federal government are brought together to carry out research endeavors not normally within the capability of a single university. Four Nobel prizes have been awarded for research performed at BNL.

The Laboratory is located on Long Island, New York, on the site of Camp Upton which was a training camp for U.S. soldiers during World War I and World War II. More than 250 buildings and other structures in the center of the 5,265-acre site make up BNL's physical plant.

Brookhaven National Laboratory is near the geographic center of Long Island, 65 miles (100 kilometers) east of New York City. The Laboratory is somewhat isolated and does not have the all normal services of a city, town, or village. The Upton Post Office is, however, located within the boundaries of the BNL facility. The nearest villages (or hamlets) are more than 5 miles (8 kilometers) away. Public transportation in the surrounding areas is minimal, at best, and modes of transportation should be considered for lengthy visits.

The National Synchrotron Light Source

The National Synchrotron Light Source (NSLS) is the nation's largest facility dedicated solely to the production of synchrotron radiation. The facility has two electron storage rings: a vacuum ultraviolet (VUV) ring, which operates at an electron energy of 800 MeV designed for optimum radiation at energies between 10 eV and 1 keV, and an X-Ray Ring which operates at 2.584 to 2.8 GeV to optimize radiation between 1 keV and 20 keV. Specialized beamlines also deliver radiation at infrared energies, hard x-rays in excess of 100 keV, and gamma rays at 200-400 MeV. Most of the 30 X-ray and 17 VUV beam ports are further split into two to four beamlines. A floor plan of the NSLS is shown in the centerfold.

The VUV and X-Ray Rings accommodate scientists from universities, industries, government laboratories, and foreign institutions. A wide range of research techniques is being used by biologists, chemists, solid state physicists, metallurgists, and engineers for basic and applied studies. Among the techniques are EXAFS (extended x-ray absorption fine structure), small-angle scattering, diffraction, topography, radiography, fluorescence, interferometry, gas phase spectroscopy, crystallography, photoemission, radiometry, lithography, microscopy, circular dichroism, photoabsorption, and infrared spectroscopy. Details about the primary research areas, beamline capabilities, and contact information for beamline personnel are in the NSLS Beamline Guide. Copies can be obtained from the User Administration Office, and this information can also be obtained through the NSLS Home Page on the World Wide Web (www.nsls.bnl.gov).

Fields of Research

Experiments are performed at the NSLS in the following fields of research: **Chemical Sciences** (Electronic and Structural Chemistry, Physical Chemistry, and Inorganic Chemistry), **Materials Sciences** (Materials Science and Metallurgy, Solid State Physics, Miscellaneous Materials Studies), **Life Sciences** (Bioenergetics, Biomedical Research, Medical Physics, Molecular Biology, Structural Biology), **Geosciences and Ecology** (Environmental Science, Geosciences, Nuclear Waste Management, Plant Sciences), **Applied Science and**

Engineering (Applied Physics, Atomic Physics, Computer Sciences, Energy Analysis, Energy Sciences, Energy Technology, Facilities Engineering, Reactor Engineering), and in **Optical/Nuclear/General Physics** (Accelerator Physics, High Energy Physics, Nuclear Data, Nuclear Physics, and Synchrotron Instrumentation).

Research Techniques

Experiments using the following research techniques can be performed at the NSLS: Absorption Spectroscopy, Circular Dichroism, High Pressure Physics, High Q-Resolution Scattering, Imaging, Medical, Tomography, X-Ray Microprobe, X-Ray Microscopy/Holography, X-Ray Topography, Inelastic Scattering, Infrared Spectroscopy, Lithography, Macromolecular X-Ray Crystallography, Nuclear Physics, Photoemission Spectroscopy, Photoionization, Radiometry, Small Angle Scattering, Biology, Materials Science, Small Molecule Crystallography, Powder, Single Crystal, Standing Waves, Surface Scattering/X-ray Reflectivity, Time Resolved Fluorescence, UV Reflectometry, X-Ray Emission Spectroscopy

Section 2
Conducting Research

A. Modes of Access to Beam Time

The NSLS is a dedicated synchrotron radiation facility made available to scientists and researchers worldwide. The user modes available at the NSLS are listed below.

1. General User Program

General Users are scientists interested in using existing NSLS facilities for experimental programs. Access to the NSLS is through a peer-reviewed proposal system. Proposals are rated by the Proposal Study Panels (PSP) three times a year. All beamline and beam time allocations are made by the NSLS Allocation Panel (AP) or the Insertion Device Executive Committee (IDEC).

General User Proposal Submission: The NSLS accepts proposals for programs as well as for single experiments. Proposal forms and detailed instructions are available from User Administration or the NSLS website. Proposals are generally active for a two-year period (see *Proposal Expiration* below) and beam time may be requested in each of the six cycles within that two-year period. Please note, however, that the submission of a proposal is not an automatic request for beam time. After the initial proposal is submitted, beam time requests must be submitted in each subsequent cycle. The user will receive written notification of receipt of the proposal.

Deadlines for Proposals and Beam Time Requests: Proposals and Beam Time Requests must be received by NSLS User Administration no later than 5:00 p.m. eastern standard time on the following dates each year:

Deadline:	September 30	January 31	May 31
Cycle:	January - April	May - August	September - December

Proposals Review and Ratings: The Proposal Study Panels (PSPs) at the NSLS are responsible for rating General User proposals for scientific or technical merit and innovation and for setting a maximum amount of beam time which a proposal may be allocated during its lifetime. Proposals are rated on a scale of one to five, one being the highest rating and five being the lowest. Proposals with ratings of a three or lower may wish to submit a Replacement Proposal which address the PSP comments in order to improve the rating and thus improve chances of receiving beam time. Proposals with ratings of four or lower are automatically inactivated and should not expect to receive beam time. The user will receive written notification of the rating.

Replacement Proposals: A Replacement proposal completely replaces an existing proposal, usually for the purpose of improving its rating by addressing PSP comments. Replacement proposals are rated by the PSP before going to the AP/IDEC.

Requesting Beam Time. A proposals does not automatically receive beam time for every cycle during its lifetime. A Beam Time Request must be submitted on or before the deadline for each scheduling cycle in which beam time is desired. Beam Time Requests are not rated again, but are routed directly to the AP/IDEC for beam time allocation.

Beam Time Allocation: The Allocation Panel (AP) and the Insertion Device Executive Committee (IDEC) are charged with allocating beam time to both new Proposals and Beam Time Requests. Proposals that request but are not allocated beam time during a cycle will automatically receive a rating upgrade to improve

their chance of being allocated beam time during subsequent cycles. Once beam time has been allocated, the original proposal rating is reinstated. The user will receive written notification of the beamline and beam time allocated.

Proposal Expiration: Proposals also become inactive after (1) two years have elapsed, (2) the maximum beam time allotment has been reached, (3) a Replacement Proposal has been submitted, or (4) the proposal received a rating of four or lower.

Scheduling Beam Time. Once the beamline and number of days are allocated by the AP/IDEC, the Principal Investigator is notified in writing. To arrive at a mutually acceptable date for their experiment, the Principal Investigator must contact the beamline personnel listed on the General User Check Sheet that they receive from the User Administration Office. These dates are confirmed in writing by the User Administration Office. The user will receive written notification of their scheduled beam time.

Declining Beam Time. General Users may withdraw their Proposal or Beam Time Request any time before the AP/IDEC beam time allocation meeting without penalty. The NSLS takes very serious exception to Users who decline beam time once it has been allocated to them. A value of 0.5 will be added to a General User's proposal rating if allocated beam time is not used by the General User. Allocation meetings are held on or about March 15, July 15, and November 15 of every year. Contact NSLS User Administration for exact dates.

Appeals. The appeals mechanism is open to anyone who thinks that they might be justified in declining beam time. Questions about procedures, proposal ratings, or comments from the PSP or AP should be addressed to the User Administration Office in writing immediately.

2. Participating Research Teams (PRTs)

In addition to the beamlines constructed by the NSLS staff for general usage, a large number of beamlines were designed and instrumented by Participating Research Teams (PRTs). Membership in a PRT is open to all members of the scientific community who can contribute significantly to the program of the PRT (i.e., funding, contribution of equipment, scientific program, design and engineering, operations manpower, etc.). PRTs design, construct and maintain beamlines and carry out the day-to-day activities of managing a beamline at the NSLS.

The PRTs are entitled to up to 75% of their beamline(s) operational time for, generally, a renewable three-year term. The remaining 25% of the available beam time is allocated to the General User Program. The PRTs, acting as members of the NSLS community, will provide liaison and full utilization support to General Users. Some of their responsibilities include review of all General User Proposals requesting time on their beamline, for beam time scheduling and training users to work on their beamline.

PRT Proposals. Written proposals to establish new PRTs should be directed to the Chairman of the NSLS, Bldg. 725B, Upton, NY 11973. Guidelines for these proposals can be obtained from the User Administrator.

3. Collaboration with PRTs

In some instances, a collaborative arrangement can be made with the PRT of a beamline. Part of such an arrangement could be joining the PRT, contributing funds to the operation of the beamline, or sharing authorship of resulting publications. These arrangements and their terms are entirely between the beamline PRT management and the collaborator.

4. Proprietary Research

Proprietary research is work conducted under a Class Waiver for Proprietary Users of Energy Research Designated User Facilities. Such research may be conducted by private individuals, representatives from

educational institutions, nonprofit organizations, or industry. Under the terms of the DOE Class Waiver, the user is obligated to pay the full-cost recovery rate for NSLS usage. In return, the user has the option to take title to any inventions made during the proprietary research program and to treat as proprietary all technical data generated during the proprietary research program. The terms and conditions under which such proprietary research may be conducted at the NSLS are set forth in the NSLS Proprietary User's Agreement, which can be obtained from the User Administration Office.

Proprietary Research Proposals. Special procedures must be followed to conduct proprietary research at the NSLS. A Proprietary User's Agreement must be in place before such research can occur. Contact the User Administrator for further details. Proprietary work is most often conducted by PRTs or by those collaborating with PRTs. Proprietary research proposals containing a non-proprietary description of the work are reviewed and approved by the NSLS Chairman. Such proposals can be submitted at any time prior to the start of work. If unable to obtain beam time through PRT membership or collaboration, then beam time for proprietary work can be requested through the General User Program. In this case, the proposal and a Proprietary Beam Time Request form must be received prior to the allocation meeting for that cycle (on or about November 15, March 15, or July 15).

5. Classified Research

Classified Research can be performed at the NSLS. Extensive discussions with the NSLS Chairman must take place in advance of such research.

6. Feasibility Studies

Feasibility Studies which are not proprietary in nature may be eligible for limited amounts of beam time depending on the availability of the requested beamline(s) and on the type of work. Contact the User Administrator for more information.

B. Charges for Beam Time

With the exception of proprietary research, there is no charge for beam time. Proprietary research is charged in 8-hour shift units, even if the full 8-hour shift was not utilized. Shift 1 is 0000 hours to 0800 hours. Shift 2 is 0800 hours to 1600 hours. Shift 3 is 1600 hours to 2400 hours.

C. Human Tissue Research

Legal requirements to protect human subjects apply to a broad range of research activities and are directed at the ethics issues involved with human research. These requirements apply to work involving human bodily materials including individual human cells or tissue, blood, urine, nail clippings, hair, and almost any other sample that is collected from a human subject. Human proteins expressed in bacteria cultures are NOT covered.

Work with human materials at the NSLS is typically exempt from these requirements. A project is exempt if it meets the following two criteria:

1. The samples under study cannot be traced to the individual donor.
2. The samples are collected before the study begins.

The BNL Office of Research Administration (ORA) requires that researchers report their exempt human studies research activities to the BNL Institutional Review Board (IRB) with a form (instructions included) they provide on their website (http://www.ora.bnl.gov/IRB/FORMS/exempt.doc). Researchers are required to provide a summary of their research on the exempt form. The summary should be concise and focused on the origin of the samples and the procedures involved when working with the samples. One or two

paragraphs is adequate to meet this requirement. The IRB does not require an explanation of the research goals, just a brief report of what will be done with the samples.

Submit the IRB form early to ORA to avoid delays in starting your experiment. ORA will issue an exempt research number as confirmation that the project is accepted as exempt. You will need that number to proceed with your experiment.

Human subject research that is not exempt must be reviewed in detail by the IRB. Users planning non-exempt work should contact IRB early in planning the experiment to allow time for review. More information is available at the IRB website: http://www.ora.bnl.gov/IRBSITE.html.

D. User Liaisons and Support

1. **Beamline Staff**. Beamline staff provide utilization support to their collaborators as well as to General Users. The assistance includes Beamline Orientation and Safety Awareness (BLOSA) training as well as scientific and technical support.

2. **NSLS Experimental Systems Group Staff Liaison**. Each General User group is assigned a member of the NSLS Experimental Systems Group staff who will be available when the group arrives to assist them in getting the experiment started and running smoothly. The staff member will be science-specific where possible, and will provide a conduit for General User access to NSLS support and, when required, supplement the Beamline Personnel role.

3. **Experimental Review Coordinator (ERC)**/Safety Approval Form Reviewer. Andrew Ackerman, (x5431, pager 0338, ackerman@bnl.gov). Oversees safety of operations and experimental programs, reviews Safety Approval Forms, oversees safety and health training, and general safety and industrial hygiene issues.

4. **Experimental Operations Manager**: Steven Ehrlich (x7862, ehrlich@bnl.gov). This scientist is a member of the NSLS Experimental Systems Group. Circumstances which affect other users, such as requests for special storage ring operation or changes in schedule, should be referred to him. He also runs the weekly X-Ray and VUV Users' Meetings where scheduling, machine operation, and other issues of interest to experimenters and staff are discussed.

5. **Users' Executive Committee (UEC)**. The UEC promotes and encourages research at the NSLS by providing for organized discussions among users of the facility as well as between the user community and the facility administration.

6. **Special Interest Groups (SPIGs)**. The UEC membership includes the Special Interest Group (SPIG) Representatives, who represent the needs of user communities such as EXAFS, imaging, biology, UV, etc. Current committee members are listed on the bulletin board in the NSLS main lobby and are also on the NSLS Home Page.

7. **General User Oversight Committee (GUOC)**. Composed of researchers from outside the NSLS, the GUOC is the appeal committee for handling disputes between the PRTs, General Users, and the NSLS.

E. User Obligations

1. **Proposals**: Users who submit proposals under the General User Program must address all items and remarks from the PSP and/or the AP/IDEC which are listed on the letter from User Administration. Special attention should also be given to items that are specified on the General User Check Sheets attached to the letter. Failure to address any items on the Check Sheets may jeopardize a General User's beam time allocation and/or prohibit them from working at the NSLS.

2. **Required Training**: All users must receive NSLS Safety Orientation (see Section 6) before access to the experimental floor will be granted. The orientation must be repeated every two years. In addition, users must arrange to be trained on their allocated beamline so that they can perform their experiments safely. Additional BNL training may be required depending on the type of equipment, materials, or activities that the user will be conducting (e.g., the handling of radioactive material, the use of lasers or overhead cranes, generation of hazardous waste). Arrangements for Beam Line Orientation and Safety Awareness (BLOSA) must be made directly with the beamline personnel. Approval to operate a beamline without beamline personnel present is the decision of the beamline representative. The Operations Coordinators have the right to deny untrained users the use of the beamline until acceptable knowledge can be demonstrated.

3. **Environment, Safety and Health Requirements**: All users during their work at the NSLS are expected to comply with the BNL environment, safety and health requirements and to conduct their work within the controls established by the NSLS during the experimental safety reviews.

4. **BNL and NSLS Policies and Procedures**: All users are expected to comply with all BNL and NSLS Policies and Procedures as outlined in Section 4 of this guide, the NSLS Policies and Procedures Manual located at http://www.nsls.bnl.gov/PandP/pnp-toc.htm and BNL's Standard Based Management System (SBMS) located at https://sbms.bnl.gov/.

5. **Equipment Identification and Tagging**: The Department of Energy requires that all Capital Equipment at BNL have bar codes or tags to indicate ownership. If your organization does not have tags (with logos, etc.), NSLS will supply them, free of charge. Obtain tags from the NSLS stockroom, fill in the name of your organization in the space provided, and apply one tag to each item of unidentified equipment belonging to your organization. Serial numbers on the blank tags are for your optional use in record-keeping. Please note that BNL's Supply & Materiel Division conducts periodic inspections. Also note that property tags on BNL-owned equipment are not to be removed.

6. **Follow Check-In and Check-Out Procedures**: Users must follow all Check-In procedures as outlined in Section 3 and all Check-Out procedures as outlined in Section 8.

7. **Publications**

   A. Acknowledgments: The following acknowledgment is be used when referencing work performed at the NSLS:

   > *"Research carried out (in part) at the National Synchrotron Light Source, Brookhaven National Laboratory, which is supported by the U.S. Department of Energy, Division of Materials Sciences and Division of Chemical Sciences."*

   General Users and other non-PRT members should also include an acknowledgment of support and contributions by beamline personnel.

   B. Publication Lists: All users are obligated to inform the NSLS of their publications or Ph.D. theses based on research carried out, in whole or in part, at the facility. The NSLS compiles a list of all of these publications, and makes it available in various publications and reports. The publication list includes work in print as well as work submitted or accepted. Users must provide the PRT of the beamline on which their work was conducted with all applicable reference information.

   C. NSLS Activity Report:

   Abstracts. Users are asked to provide a brief summary of their experiment (also called an experimental abstract) at the NSLS. Abstracts and figures are submitted electronically for inclusion in the NSLS Activity Report.

Science Highlights. Users who feel the results of their research may result in significant interest among the scientific community may submit a brief proposal to have their research published in the Science Highlights section of the NSLS Activity Report which is distributed worldwide. Email NSLS User Administration with three to four sentences outlining the research, experiment and results.

Section 3
Arrival and Check-In Procedures

A. Before You Arrive

1. Set Up Operating Accounts and Telephone Access Codes

All users should set up a $1,000 operating account to cover operating expenses while at the NSLS, such as charges for use of trades, shops, stockroom withdrawals, and telephone charges. Operating accounts, which are subject to BNL overhead, are established by the user's home institution via a purchase order. One or more persons can have signature authority on the account. See Section 5, User Accounts, for details.

2. Foreign Nationals Must Submit Form IA-473

All foreign nationals must submit Form IA-473, "Request for Foreign National Unclassified Visit or Assignment," online at http://nslsweb.nsls.bnl.gov/nsls/users/procedures/foreign.htm, within the timeframe and manner prescribed by the NSLS User Administrator (in some cases, 90 days prior to arrival at BNL). A visit request is necessary to conduct work at the NSLS. Approval of the visit request must be verified at the time of the foreign national's arrival at BNL. Principal Investigators have the obligation of advising all their experimenters to submit this form.

3. Submit Safety Approval Form

A Safety Approval Form (SAF) must be submitted for every experiment, at least seven days prior to the start date of the experiment. All experimenters must be listed on the SAF. The SAF is submitted online at: http://130.199.76.52/safety.

4. Gate Arrival Registration

All users are required to notify the NSLS User Administrator of the date of their intended visit to NSLS to conduct work. Notification is made by registering online for gate access at least seven days prior to arrival each time a visit to BNL is planned. URL: http://nslsweb.nsls.bnl.gov/nsls/dbforms/user-regis.asp.

All foreign nationals who are visiting the NSLS for the first time or whose appointments have expired must arrive during normal workdays (Monday through Friday between the hours of 8:00 a.m. and 3:00 p.m. EST, except holidays) to allow for proper verification of the visit request. Any foreign national arriving at any other time must possess a valid, active appointment with the National Synchrotron Light Source or will be requested to leave the NSLS to return on the next normal workday.

5. Set Up Housing

A number of furnished apartments (with one to four bedrooms) and dormitory rooms are available.

- For housing between September 1 and May 31, reservations are made directly with the Housing Office at (631) 344-2541.

- For housing during the summer (June 1 through August 31), reservations are made by contacting NSLS User Administration.

Cash, checks, Visa and Master Charge, or user account numbers can be used for paying housing bills. A current Laboratory guest appointment is required to occupy on-site housing. The apartments are supplied with linens and utensils.

6. Transportation and Maps

Maps of Long Island and BNL are located on the centerfold of this Guide. The Laboratory is somewhat isolated and does not have the all normal services of a city, town, or village. Public transportation in and around the areas surrounding BNL is minimal, at best, and modes of transportation should be considered for lengthy visits. The nearest villages (or hamlets) are more than 5 miles (8 kilometers) away. BNL has a train shuttle service available to transfer guests, users, and employees to and from the Ronkonkoma Train Station (see Section 7, Trains). An onsite BNL courtesy van service is available Monday through Friday, 7:30 a.m. to 4:15 p.m. (URL: http://www.bnl.gov/bnlweb/shuttle.html).

B. What To Bring With You

1. BNL Photo ID Card

If this is your first visit, you will be issued your own card when you register in the User Administration Office.

You must carry your BNL Photo ID card with you at all times when you are at BNL. It is an important form of identification. You will need it to access BNL's main gate and to access the NSLS building, experimental floor, and stockroom.

2. Passport or Social Security Card

All foreign nationals must bring their original Passport and Visa each time they visit BNL. The Passport is required for registration and renewal of registration. All U.S. citizens should bring their social security card.

3. Experiment Documentation

In certain instances, you will be asked to verify authorization to be onsite when entering BNL. All users should bring a copy of all documentation received from NSLS User Administration. This includes the Beam Time Allocation Letter and, for foreign nationals, approval of Form IA-473.

4. Medical Insurance Cards

If you have medical insurance, bring your insurance and prescription cards. BNL does not provide medical coverage to users under guest appointments. Guests must make their own provisions for medical insurance.

C. Getting to BNL

For those driving cars, the Laboratory can be reached by taking the Long Island Expressway (also called Route 495 or the LIE) east to Exit 68, then traveling north on William Floyd Parkway for approximately 1.5 miles (2.4 kilometers). The Laboratory entrance is at the second traffic light, on the right-hand side of the road. More detailed directions can be found at URL: http://www.bnl.gov/bnlweb/maps.html#directions.

A map of Long Island can be found at:
http://www.bnl.gov/bnlweb/limap.pdf

A map of the BNL site can be found at:
http://www.bnl.gov/bnlweb/sitemap.pdf

A map of the NSLS experimental floor can be found at:
http://nslsweb.nsls.bnl.gov/nsls/tour/maps/725expfloor.pdf

D. When You Arrive At BNL

1. Entering the Main Gate

A guard is always on duty at the main entrance to BNL. You will be asked to verify that you have authorization to enter the BNL site. To ensure that the guard has advance notice of your arrival, be sure to register online with the NSLS. URL: http://nslsweb.nsls.bnl.gov/nsls/dbforms/user-regis.asp.

A current BNL Photo ID or valid BNL car sticker is required for entrance to the Laboratory. If you do not have either, you must be prepared to provide one of the following:

a. The name, building, and telephone extension of the person expecting you. This should be a co-worker already at the NSLS, or the Local Contact of the beamline on which you are scheduled. Please note that the guard may contact this person in your presence to verify you have authorization to be onsite at BNL. If the guard cannot reach this person by phone, you may be asked to wait at the gate until authorization is verified. For this reason, it is best to arrive at BNL during the hours of 8:00 a.m. and 3:00 p.m.

b. Your BNL on-site room key, if you have already checked in.

c. Though it will not guarantee approval to access the BNL site, all users should bring copies of any documentation from NSLS User Administration, including the Beam Time Allocation Letter and, for foreign nationals, the Form IA-473 approval.

If you are unable to provide acceptable proof of identity to the guard, the guard should contact User Administration (x7976) during business hours or the Control Room (x2550) at other times.

If you arrive by airport limousine, you will be dropped off at the main gate. After business hours, you can ask to be dropped at the Housing Office or at Security Headquarters, which is about a half mile into the BNL site from the main gate. There are telephones at all locations for contacting colleagues.

2. Registration at NSLS

The NSLS is building number 725 and is located toward the east end of Brookhaven Avenue.

First-Time Users and Users with Expired Appointments must arrive at NSLS User Administration before 3:00 p.m., Monday through Friday, to allow sufficient time for training and registration. Note: User Administration is closed on BNL-observed holidays.

Registered Users with Active Appointments may arrive at any hour. A radiation dosimeter, if needed, is provided by User Administration Monday through Friday, 8:00 a.m. to 5:00 p.m. or by the Control Room (x5046) at any other time.

3. Housing Check-In

The Housing Office is located in Building 179 and is open from 8:00 a.m. to midnight Monday through Friday, and 4:00 p.m. to midnight on Sunday (closed on Saturdays and holidays). If you have a confirmed reservation, pick up your key on arrival at the Housing Office. For arrivals when the Housing Office is closed, keys are held at the Police Headquarters, Bldg. 50. At the end of your stay, return keys to the Housing Office or to Police Headquarters. Checkout time is 3:00 p.m. on the last day of occupancy.

Section 4
Important BNL Policies

The following policies are applicable to all BNL employees as well as to individuals holding Guest appointments with the Laboratory. All NSLS users are issued guest appointments when they register in the User Administration Office and should therefore be aware of these policies:

Equal Employment Opportunity. The Laboratory has a long-standing commitment to a policy of equal opportunity. Our goal is equality of opportunity in all aspects of employment, including placement, development programs, job assignments, transfers and promotions without regard to race, creed, , sex, age, national origin, physical or mental disability or veteran status. The Diversity Office is located in building 185A and may be reached at x3318.

Sexual Harassment Policy. Brookhaven National Laboratory is committed to maintaining a work environment that us free of threatening, intimidating or harassing conduct, including sexual harassment. Any employee who harasses another employee because of race, religion, color, sex, national origin, disability, veteran status or other reasons will be subject to disciplinary action up to and including discharge.

Within the scope of the Laboratory policy, it is the responsibility of each supervisor to create and maintain an atmosphere free of sexual harassment. It is also the supervisor's responsibility to promptly investigate all complaints of sexual harassment and to take appropriate corrective measures which may include disciplinary action.

It is the responsibility of each individual to be aware of the appropriateness of their own conduct and behavior, and to respect the rights of others.

Under federal laws, sexual harassment is included as a form of sexual discrimination. The basic definition of sexual harassment is: unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature, when: Submission to such conduct is made a term or condition of employment. Submission to or rejection of such conduct is used as a basis for an employment decision affecting the employee. The harassment has the purpose or effect of unreasonably interfering with the employee's work performance or creating an environment which is intimidating, hostile or offensive to the employee. Some examples are displaying pictures with obvious sexual content, using offensive language or words with sexual overtones, unwanted physical contact, or a remark regarding a sexual relationship. Individuals who believe they have experienced a possible sexual harassment situation are encouraged to make it clear to the other party, either verbally or in writing, that the behavior is unwelcome and/or objectionable.

Several avenues within the Laboratory are available to individuals for filing sexual harassment complaints: The complainant should contact their Supervisor, Division Head or Department Chairperson. As an alternative or in addition, he/she may contact the Diversity Office at x3318 or the Employee Relations Counselor in the Personnel Division at x2888. The employee Assistance Program professionals can offer emotional support to an employee experiencing a problem, and may be reached at x4567.

Alcohol and Substance Abuse Policy. The Laboratory, as an employer, is interested in the well-being of its employees. Great emphasis is placed on maintaining a safe and efficient work environment. The achievement of this goal depends on the active cooperation of everyone. Individuals are expected to have the same concern for personal safety and the safety of their fellow workers as they have for the performance of their work. The Laboratory recognizes that alcohol or substance dependency are illnesses which can be treated and is prepared to offer assistance to affected individuals. Those who use or traffic in illegal drugs, abuse alcohol and/or controlled substances pose unacceptable risks to the safe and efficient operation of the Laboratory. In addition to jeopardizing safety and/or impacting on performance, conduct, and reliability, drug abuse is illegal and could

lead to criminal prosecution. The Alcohol and Substance Abuse Policy is applicable to all those present on the Laboratory site.

Illegal Drugs. Individuals are strictly prohibited from using, possessing, selling, purchasing, distributing, or being under the influence of illegal drugs on the Laboratory site or while performing Laboratory business. Individuals who are covered under DOE mandated guidelines are strictly prohibited from using, possessing, selling, purchasing, distributing or being under the influence of illegal drugs at any time.

Controlled Substances and Other Drugs. Individuals are prohibited from abusing controlled substances. Since a large number of prescription and over-the-counter drugs may also impair an individual's ability to perform, you are expected to consult your physician for specific information or possible side effects. If valid prescription drugs and over-the-counter medications affect job performance or cause an individual to be at work in an impaired state, that person will not be permitted to work.

Alcohol. The consumption or unauthorized possession of alcoholic beverages on site, except at the Brookhaven Center and on-site housing, is specifically prohibited. Exceptions allowing for limited use of alcohol on the Laboratory site may be permitted after normal working hours upon approval by a member of the Directorate. Employees who consume alcohol at such a function may not return to work following the event.

Rehabilitation. The Laboratory maintains an Employee Assistance Program (EAP) which provides help to those who suffer from alcohol and/or substance abuse. It is the responsibility of each individual to seek assistance from the Laboratory EAP or other private or public counseling services before alcohol and/or substance abuse affect performance. The EAP manager is bound by professional ethics to protect the privacy of the communications which occur during the course of contact.

Smoking. Smoking is prohibited in all Laboratory buildings and vehicles. The only exceptions are the residential units and the smoking section of the Brookhaven Center Pub.

Medical Care and Health. The Occupational Medicine Clinic is responsible for the employee health programs at the Laboratory including the Employee Assistance Program. The Clinic provides guidance to the Laboratory management and employees in areas of health. It is also responsible for required medical health examinations first aid, limited medical care (primarily occupational illness or injury), and occupational health programs. In general, you should use physicians and medical facilities in your own home localities for personal medical problems. Health information is available through the Wellness Coordinator on extension 5923.

The Employee Assistance Program (EAP) is designed to help with mental health problems which occur or impair job performance. The EAP provides confidential assistance for a wide variety of difficulties such as alcohol and drug abuse, family/marital problems, or personal and emotional problems. The EAP Psychologist also provides individuals and Laboratory management with information and training on mental health issues. The EAP Psychologist is located in the Medical Building, Room 5-15, and may be reached at x4567.

Environment, Safety, and Health. The Laboratory's Environment, Safety, & Health programs are designed to assure a safe workplace for all staff, users, and visitors, and to ensure protection of the environment and the public. Users are expected to comply with all ESH requirements applicable to their work while at the NSLS. The safety review required for all experiments at the NSLS will identify ESH issues and establish appropriate controls to conduct your research in a safe manner. Adherence to these controls is mandatory.

Information regarding NSLS and BNL ESH regulations can be found on the NSLS ESH webpage (URL: http://www.nsls.bnl.gov/Safety/safety.htm). Expert advice and support for implementation of these requirements can be obtained from the NSLS ESH personnel. Do not hesitate to contact any member of the staff listed in Section 5.

Security and Laboratory Protection. The Laboratory is not open to the public. Entrance is restricted to persons having official business at the Laboratory and properly sponsored visitors. As part of the Laboratory protection program, you are issued an identification card and an automobile sticker for your car. A privately owned motor vehicle may not be driven on the Laboratory site unless the vehicle has proper state registration, and the operator possesses a valid state operator's license.

The general traffic rules for the State of New York have been adopted for both private and Government vehicles operated on the Laboratory site. The following traffic rules apply specifically to the Laboratory site. Speed: 30 miles per hour, except where otherwise posted. Parking: permitted only in designated parking areas in accordance with any posted limitations.

No person, except members of law-enforcement agencies, may bring or carry firearms on the site without special authorization.

Protection of Government Property. The protection and safeguarding of Government property is everyone's responsibility. All materials and services located on the Laboratory site, unless properly identified with another organization, are the property of the United States Government. The theft, misuse, or personal use of Government property is unlawful and constitutes grounds for immediate discharge. Individuals should keep government property secured and should report and misappropriation to the Police Group. No property or material, except for personally owned goods, may be removed from the Laboratory site without an authorized Property Pass or Loan Agreement. All Laboratory loaned equipment must be for official Laboratory business and be reported to the designated department/division Property Representative.

The Laboratory reserves the right to inspect and search vehicles leaving the site.

Mismanagement, Gross Waste of Funds, Abuse of Authority. Concerns regarding mismanagement, gross waste of funds or abuse of authority should be immediately brought to the attention of your line management, if possible. If the problems is not resolved, contact the Employee Relations Counselor on extension 2888, for a formal investigation of your concern.

Section 5
User Services

Building Manager

The Building Manager is Mike Kelly (x3476, pager 5350, or kelly1@bnl.gov.
The Assistant Building Manager is Gerry VanDerLaske (x4926, pager 8222, or gerryv@bnl.gov)

See the Building Manager for technical support and general assistance on the experimental floor. The following items are handled: Intra-Laboratory Requisitions (ILRs) to charge work to a user account; Work Requests for plumbers, electricians, carpenters, surveys, machining, technical support, custodians and riggers; short- or long-term equipment storage; allocation of experimental set-up booths; initial contact for NSLS Laboratory use; and scientific equipment repair services.

Cleaning Facility (BNL Central Shops)

Solvent cleaning of vacuum parts, leak checking service also available. Work is billed to user via a Laboratory ILR. Contact the NSLS Building Manager Mike Kelly (x3476, kelly1@bnl.gov).

Computer Graphics Services

The following services are available at BNL: Videotaping and conversion (x3680), Graphic Design (x7288), Illustration (x2913), and Photography (x2400). These services are normally obtained with an Intra-Laboratory Request (ILR) or Purchase Order charged to the user's account.

Computer System Administration

Questions or requests for assistance should be directed to Herb Langenbach at x5330, langenba@bnl.gov.

Computers

Computer Access and Repair. Users can have access to BNL and NSLS computing capabilities. For general computing assistance on BNL computers between the hours of 8:00 a.m. and 6:00 p.m., call the HELP desk at the Computer and Communications Division (CCD), on x4159. On-site computer equipment repair service is also available; please call x5093 to request repairs or installations. Telephone dial-up access to BNL computing can also be arranged through CCD.

Most beamlines have an account on the NSLS HP Unix system for use by outside users. Users should contact the beamline representative to determine if this is available to them.

Users requiring a network connection, node name, or an IP address should contact NSLS Computer Systems Administrator Herb Langenbach (x5330 or langenba@bnl.gov). To obtain e-mail service complete an NSLS Computer Account Request Form, available in the User Administration Office.

Control Room Operators

Control Room Operators can be reached at X2550. A Machine Operator is on duty at all times except during extended shutdowns. The public address system and the building evacuation alarm are operated from the Control Room. Machine Operators coordinate the response to any emergency at the NSLS. Call only when necessary.

Copying/Duplication Service

Photocopy machines are available in the NSLS User Library and at most mail stops. For large copying jobs (more than 25 copies) or color copies the services of Quick Copy in Bldg. 197 (x2900) are required. Pick-up/delivery and over-the counter services are both available.

Custodial Services

Custodians work on a continuing basis to keep the NSLS clean and free of litter. If there is a need for special attention, such as a water leak mopped up, contact the Building Manager Mike Kelly (x3476, pager 5350) during regular working hours or an OP CO (pager 5824) at other times.

Cranes

The NSLS owns several boom-cranes for small jobs. The VUV Ring has two overhead 2-ton cranes, each of which spans one half of the VUV floor. These are IR controlled. Operators must present a Safety Awareness Certificate (SAC) to the OP CO in order to check out the IR controller. Under BNL regulations, all cranes or hoists must be operated by or under the supervision of the cardholder. This card is obtained by attending a seminar given periodically and a performance demonstration of operation by an NSLS designated examiner. Certification lasts 36 months. Various beamlines around the X-Ray Ring have their own manually operated overhead hoists or cranes. There is an electrically controlled overhead crane in the X-Ray staging area.

Electronics Repair

Limited repairs for electronic equipment are available from an outside contractor through the Control Room. Contact Control Room Supervisor Randy Church (x2550 or x2736, pager 5310). Obtain a shipping memo form from outside office 2-177 and fill it out according to the example in the Control Room. Pickups are made on Tuesdays and Fridays. The user should call the contractor on the day before scheduled pickups to alert the contractor of the pickup. Items to be repaired should be left in the Control Room with the completed shipping memo. Costs are charged to the user's account.

Environment, Safety and Health (ES&H) Staff

ESH Coordinator: Nicholas Gmür (x2490, gmur@bnl.gov, pager 5324). Coordinates the Laboratory ES&H program within the NSLS.

Experimental Review Coordinator (ERC)/Safety Approval Form review. Andrew Ackerman, (x5431, pager 0338, ackerman@bnl.gov)

Environmental Services Division personnel provide technical support for environmental and hazardous waste issues. Environmental Compliance Representative, Deborah Bauer (X5664, pager 9105, bauer@bnl.gov).

Industrial Hygienist: Andrew Ackerman, (x5431, pager 0338, ackerman@bnl.gov) Oversees safety of operations and experimental programs, reviews Safety Approval Forms, oversees safety and health training, and general safety and industrial hygiene issues.

Radiological Control Division Office provides technical resources, collects and issues radiation dosimeters, audits safety programs, and performs specialized measurements.

ESH Facility Representative, Chris Weilandics (x2593, pager 6208, weil@bnl.gov)
Radiological Control Technician, Rudy Zantopp (x5565, pager 6210, zantopp1@bnl.gov)
Radiological Control Technician, Marlon McAvoy (x6389, pager 9102, mcavoy@bnl.gov)

Safety Engineer, John Aloi (x7018, pager 5212) oversees hazardous materials storage and waste collection, conducts NSLS safety inspections and follow-ups.

Safety Officer Tom Dickinson,(x7196, pager 5306, dickinso@bnl.gov) oversees safety of operations and experimental programs, monitors interlock systems, shielding and general safety.

Equipment Identification and Tagging

All equipment belonging to users must be identified with a tag showing the user's organization. Blank tags for this purpose are available from the NSLS stockroom, free of charge.

Equipment Pool for Experiments

The NSLS supports an experimental equipment pool. Detectors, filters, foils, and low temperature dewars are available for short-term loan. For request forms or further information contact Syed Khalid (x7496, khalid@bnl.gov).

Experimental Operations Manager

Steven Ehrlich (x7862, ehrlich@bnl.gov). This scientist is a member of the NSLS Experimental Systems Group. Circumstances which affect other users, such as requests for special storage ring operation or changes in schedule, should be referred to him. He also runs the weekly X-Ray and VUV Users' Meetings where scheduling, machine operation, and other issues of interest to experimenters and staff are discussed.

Fax Machines

Telegrams, teletype, and facsimile services are available at the Post Office and BNL mail room. The NSLS also has a number of facsimile machines. To send a fax, you must enter your Access Code as a prefix to the number being dialed (as for a telephone call). If you are receiving a fax, please be sure the sender addresses it with your name and your beamline. The NSLS Library Fax machine (631-344-7078) is accessible at all times, and is the preferred machine for users.

Fork Lifts

The NSLS owns one forklift and several hand-operated lifts. Material loading and unloading must be done by NSLS Stockroom or certified personnel. For training, users should contact Gerry Van Derlaske at x4926, pager 8222. BNL has riggers who may be hired via an ILR for other than incidental lifting.

Gases (Inert)

The NSLS keeps a supply of nitrogen, argon, and helium gas cylinders available outside the northwest roll-up door. These gases may be withdrawn as follows:

1. From the NSLS Stockroom, obtain the cart which has the key to the cylinder rack. The bar codes for the gas cylinders are also attached to this cart.
2. Using the computer bar code reader, scan your life number, account number, stock number of the gas, and the quantity.
3. Return the cart to the stockroom as soon as you are finished.

Other gases, chemicals, and distilled water can be ordered through BNL stock (see Stockroom staff for assistance).

Liquid nitrogen for transfer into smaller dewars is available outside on the loading dock located on the western side of the NSLS building. If you are not familiar with transferring from pressure-building large tanks, see the Building Manager for instructions.

Information on hazardous gases can be found in Section 6 of this Guide.

Industrial Hygienist

Andrew Ackerman, (x5431, pager 0338, ackerman@bnl.gov). Oversees safety of operations and experimental programs, reviews Safety Approval Forms, oversees safety and health training, and general safety and industrial hygiene issues.

Interpreter

BNL Voluntary Interpreter/Translator Registry. This database is a listing of individuals willing to volunteer their services for translating and interpreting. The list is accessible on the INFORM system. Go to URL: http://www.bnl.gov/bnlweb/visitorsguide.html#translators.

Laboratory and Set-Up Space

In the NSLS and in Building 510E, there is a variety of laboratories for qualified users. Each beamline has an assigned laboratory. Users wishing to gain access to a particular beamline's laboratory should contact

the beamline's personnel or its Lab Steward. The most current list of Lab Stewards can be found at URL: http://nslsweb.nsls.bnl.gov/nsls/users/services/labspace.html. In addition, there are several laboratories and facilities designated for general use.

The NSLS also has several rooms that can be used as set-up space. Rooms can be reserved for up to six weeks. Contact the Building Manager, Mike Kelly, at x3476 to check availability and to request space.

Libraries

Green-Chasman Library. Located on the experimental floor near the Stockroom, this room is open at all times and contains a modest collection of physics, vacuum, and science news journals as well as a fax machine (631-344-7078), copier, and computer terminal.

Information Services Division (ISD). Journals may be checked out overnight and books for longer periods of time. The BNL Research Library and NSLS Library are linked to the electronic library system, INFORM. You can search for books, request reserves, and scan the list of Research Library journals by telnet to inform.bnl.gov (130.199.129.69); log on as "inform" (from on-site) or "brookhaven" (from off-site). BNL research publications can be located through the ISD website: http://bnlinfo2.bnl.gov/pubs/bnlrddb.html. For other ISD services available, visit the ISD Library website at: http://inform.bnl.gov/RESLIB/reslib.html. BNL research library hours are Monday through Friday, 8:30 a.m. to 9:00 p.m., weekends 9:00 a.m. to 5:00 p.m. Closed on holidays.

SUNY at Stony Brook Libraries, a comprehensive university library system a 30-minute drive away, are open to BNL employees and guests. On-line access to the SUNY library is available in the BNL Research Library.

NSLS Current Periodicals Room (2-142). The room can be accessed any time with a current BNL ID card.

Liquid Helium

Deliveries are made on Mondays, Wednesdays, and Fridays. Helium must be ordered at least 24 hours in advance of desired delivery date. To order, have your user account number ready and call the Gas Cylinder Warehouse between 9:30 a.m. and 11:30 a.m., Monday through Friday (x2964).

Literature

The following information can be obtained from the User Administration Office:

- *NSLS Newsletter*: Published tri-annually to coincide with beam scheduling cycles, the Newsletter is sent to over 3500 users and persons on the NSLS mailing list. The Newsletter includes the long range operating schedules for both storage rings, calls for proposals, articles describing science and instrumentation at the NSLS, and updates on topics important to the user community such as work on the storage rings, user meetings and workshops, and safety issues.

- *NSLS Activity Report* summarizes the scientific activities at the NSLS over the Fiscal Year which runs from October 1 through September 30. Available each May.

- *NSLS Community Directory*.

- *Brochures* about the NSLS and its scientific highlights.

- *Assorted Guides* on local restaurants, accommodations, stores, things to do on Long Island.

Machine Shops (BNL Central Shops)

The Laboratory's Central shops (Bldg. 462, x3356) can handle machining from instrument-making to heavy material projects.

Machine Shop for Users

Located in Room 1-124A, the User Shop is available for use 24 hours a day, 7 days a week. It is staffed weekdays during working hours for those who seek assistance in operation of the shop's machines and tools. After working hours, access is available to users who have signed an Acceptance of Responsibility Form and who have completed the shop training/orientation. Access to locked-out machinery and equipment during non-business hours is available to Level III users by signing out a key from the Control Room. A collection of power tools can be signed out during normal work hours. Users are responsible for the condition of the item while it is signed out. Contact the User Shop Manager Gerry Van Derlaske (x4926 or 4277, pager 8222) for further information on shop orientation, training, or safety issues.

Machine Status - TV Monitors are located at each beamline and in various places around the building.

Ch.	Program
2	Machine Information, messages from Control Room
3	VUV Status: current, bunch modes, Control Room messages (text screen)
4	VUV Ring lifetime (graph)
5	VUV Ring schedule
8	Cycles through selected channels continuously
9	X-Ray Status: current, bunch modes, Control Room messages (text screen)
10	X-Ray lifetime (graph)
11	X-Ray Ring schedules
14	BNL Information, special telecasts
22	User Information, meetings, announcements

Mail & Shipping Services

U.S. Postal Service. BNL has a full-service U.S. Postal Service Office (Upton branch) located in Staff Services, Building 179, x2539.

BNL Mail Service. Mail is delivered and picked up twice a day from each building on site. Users should leave internal lab mail (brown envelopes, no stamps needed) and U.S. Mail (regular envelopes, stamps required) in the outgoing mail boxes at NSLS mail stop 725A, located in the lobby by the elevator.

Receiving Mail. During regular working hours, packages and other special deliveries are brought to the Stockroom while regular mail is taken to the mail stops around the building. Each beam port is assigned a mail slot at NSLS mail stop 725A near the elevator in the lobby. The beamline number should be on all mail addressed to users. Mail to users should be addressed as follows:

User's name
Brookhaven National Laboratory
NSLS Bldg. 725A / (user's beamline number)
P.O. Box 5000
75 Brookhaven Ave.
Upton, NY 11973-5000

Receiving Deliveries. Deliveries are made to the NSLS Stockroom by Federal Express, UPS, and all other carriers. You must pick up your packages at the Stockroom.

Special Deliveries After Hours: After hours, and on weekends and holidays, the NSLS stockroom is unavailable for deliveries. Call the BNL Main Gate at x2240, and leave your name, building number 725, your beamline and telephone number, and indicate that you are expecting a package. The driver will call to arrange for a drop-off.

Insurance coverage should be taken on non-BNL shipments that are delivered to the Laboratory. BNL will not be responsible for any reimbursement for damage to equipment or materials belonging to outside organizations.

Shipping Non-Hazardous Items Off-Site. All shipments leaving the Laboratory must be processed through the BNL shipping department. This is to ensure all transportation guidelines and laws have been followed. All materials shipped from BNL are picked up from the NSLS stockroom and handled by the Procurement and Property Management Division (PPM), Building T-89, x2311.

To ship an item (Instructions are also posted in the Stockroom):

1. Obtain a Shipping Memo form from outside of Room 2-177.
2. Complete the Shipping Memo and drop it off at Room 2-177 for data entry. Please make sure that all information is filled in correctly on the form. You will need a Project Number and an Activity Number in order to fill out the Shipping Memo.
3. Two copies will be returned to you. Keep one for your records and attach the other to the item being shipped. Then bring the package to the Stockroom for shipment.
4. Process Knowledge Certification Forms (PKCF) are also required at this time for all shipments leaving the NSLS. Contact Marlon McAvoy (x6389) to obtain a PKCF. This form will soon be available on the web.
5. If you require any "special shipments" (example: arranging your own shipments, crating of larger items, rigging services, etc.), contact Mike Kelly (x3476) or Gerry VanDerLaske (x4926). Note: When arranging your own shipments, a shipping memo is still required and an itemized list must be provided to the Supply and Materiel Division.

Shipping Chemicals. Supply and Materiel personnel are responsible for insuring that the packaging complies with the U.S. Department of Transportation requirements, and can only do so if they are supplied with the necessary information. Because of these special DOT requirements, all packages that contain chemicals are opened and repackaged at Building T-89. To ship chemicals:

1. Complete a shipping memo as described above and identify the contents of the package.
2. Attach a Material Safety Data Sheet (MSDS) for each chemical in the package. The MSDS must include a UN number. If the materials are mixtures, or you are not sure how to identify them, contact Andrew Ackerman (x5431, pager 0338) or an OP CO for assistance.
3. Be sure that every container in the package is sealed and labeled. The name on the label must match the MSDS and the Shipping Memo. Labels are available in the stockroom.
4. Place the materials into a box such that they do not break in transit between the NSLS and Building T-89. Contents should not be loose, and equipment should be shipped separately from chemicals. Supply and Materiel will review the contents and repackage them for shipping to their final destination.

Shipping Radioactive Materials. Shipment of radioactive materials, either to or from BNL, must be conducted under the auspices of BNL's Isotopes and Special Material (I&SM) Group. Contact IS&M at (631) 344-5233 at BNL to make arrangements for these shipments.

Medical Assistance

NSLS and beamline staff are not permitted to dispense medical assistance (including aspirin, band-aids or other first aid items) for minor ailments.

BNL has an Occupational Medicine Clinic (x3670) open during regular business hours and provides services to users, guests and BNL employees. The clinic is not a comprehensive treatment facility. Staff perform a basic assessment of the patient's condition and will refer patients to their own physician, local walk-in services or a specialist. If necessary, the patient is taken directly to a local hospital emergency room.

At night or on weekends, first aid may be obtained from personnel at the Fire Department located at Bldg. 599 (corner of Brookhaven Avenue and Upton Road).

Emergency assistance, at any hour, is reached by dialing x2222 or x911 from any BNL phone.

Office Space

Offices and Desk Space. For office space in any of the buildings or trailers onsite, BNL charges a low annual fee per square foot for space occupied. The user account is billed quarterly. Contact the NSLS Administration Head Frank Terrano (x3963) with requests for space or more information.

Operation Schedules

Long-range operating schedules are published in the NSLS Newsletter. A detailed shift schedule is available in the lobby or from User Administration.

Operations Coordinators (OP COs)

Operations Coordinators ("OP COs") can be reached at x5046, digital pager 5824. OP COs are on duty at all times except during extended shutdowns. They are the persons who inspect and unlock beamlines, post Experiment Safety Approval Forms, and keep track of safety on the experimental floor. OP COs should be your first contact for questions about or problems with interlocks, safety, shielding, vacuum, etc.

Pagers

Pagers carried by BNL staff and guests are generally one of two types (voice or digital). The type of pager is determined by the first digit of the pager number.

To send a message to a *Voice Pager* (numbers 0000 through 3999):

1. Dial 3456
2. Wait for single tone, then enter the 4-digit pager number
3. Wait to hear rapid tones
4. Clearly say your name, phone number and a brief message (you have eight seconds)
5. Hang up and wait there for a return call

To send a message to a *Digital Pager* (numbers 4000 through 7999):

1. Dial 3456
2. Wait for single tone, then enter the 4-digit pager number
3. Wait to hear rapid tones
4. Enter the telephone number from which you are calling
5. Hang up and wait there for a return call

Quality Assurance

The Quality Assurance Representative is Michael Buckley, x8097 (buckley@bnl.gov).

Sheet Metal Shop

There is also a sheet metal shop (also see Weld Shop) which can do electron-beam welding. User accounts are debited for these services.

Shipping

See Mail Services.

Stockroom

A stockroom, stocked with many common necessities, is located on the experimental floor and is open 24 hours. Access after hours is obtained with your encoded ID card. You can purchase any stocked item by entering the catalog number, your guest number and account number into the computer or by using the bar code scanner. Some items, such as film and disks, must be obtained from stockroom staff during working hours or the Control Room during non-business hours. A complete set of catalogs describes all the stock

available through BNL Supply and Materiel. Items in stock at the BNL stores can be ordered by filling out a Stores Requisition in the NSLS Stockroom. Emergency orders can be processed during regular working hours by contacting stockroom personnel (x2118). After hours, contact an OP CO (x5046) for assistance. The stockroom also handles all shipping and receiving for the NSLS, including overnight packages. During regular working hours, all deliveries and pickups are made here.

Storage

Very limited short-term storage (90 days) of experimental equipment, including end-chambers, is available in the X-Ray set-up area, and two-week storage is available nearby. Contact the Building Manager to use the storage area.

Telephones

"Class of Service": BNL telephones have various "classes of service" or levels of access and restriction. Some telephones do not allow offsite calls. Others allow offsite calls provided you have a telephone access code. Most telephones should be marked with its "class of service." Descriptions for each class can be found in the BNL Telephone Directory. Various phone lists are available from the User Administration Office.

Beamline Telephones: Beamlines are under no obligation to pay phone bills for visiting users and are entitled to refuse off-site use of their phones. Most phones on the experimental floor have a sticker indicating their "class of service." Beamline staff phone numbers are listed on the green safety board at each line.

Making Off-Site Telephone Calls: In order to make off-site calls, you must have a telephone access code to charge your calls. Access codes are automatically assigned when you open a user operating account. Address questions about your account or telephone access code to the Budget Office, x7957. To call a local offsite telephone numbers using an Access Code from a BNL telephone or fax machine, follow these examples:

To make a local offsite call [let's assume your *access code is 33333* and you are calling Telephone Information which is 555-1212]: you would dial: ***2** *33333* **9** 555 1212

To make a long distance offsite call [let's assume your *access code is 33333* and you are calling (415) 888-8888]: you would dial: ***2** *33333* **9 1** 415 888 8888

***2** allows you to enter your access code
9 is necessary to get an offsite connection
1 is necessary to make long distance telephone calls

Onsite Phone Calls

On-site extensions: Dial the 4-digit number.

To Call a BNL Phone from an offsite location

To reach a BNL extension from off-site dial 344 plus the 4-digit extension. To reach the BNL apartment area from off-site dial 345 plus the 4-digit extension. Note that BNL is in area code 631.

Public Telephones

A coin-operated telephone is located in the NSLS Lobby. Calls may be placed using coins, credit cards, or by reversing charges.

Telephone Messages

Telephone messages on x5700. A computer generated voice recites the messages which are posted on Channels 3 and 9.

Tool Lending

There is a tool-lending pool in the Central Shops, where users can borrow such items as helicoil insertion tools.

Training Coordinator

Eva Rothman (x2295, erothman@bnl.gov) oversees BNL and NSLS training programs and handles requirements for long term users with permanent radiation badges. Long term users are those who will be conducting work at the NSLS for more than 60 days in a one-year period.

User Accounts

You will need a valid user account number in order to purchase items from the Stockroom or through BNL Contracts and Procurement. Occasionally the services of NSLS or BNL technicians, machinists, and welders are provided to the user community. The user's account is debited for these services. Please direct questions concerning your account number, telephone access code, signature authority, and balance to the BNL Budget Office at x7957.

Operating Accounts (81000 accounts). All users should set up a $1,000 (minimum) operating account to cover operating expenses while at the NSLS, such as charges for use of trades, shops, and Stockroom withdrawals. A telephone access code, for use in placing off-site calls and faxes, is associated with each operating account. Operating accounts, which are subject to BNL overhead, are established by the user's home institution via a purchase order. Information regarding those accounts can be obtained from the BNL Budget Office at x7957.

Proprietary Research Accounts (85000 accounts). Any beam time used for proprietary research purposes must be charged the full cost recovery rate against a proprietary account. Users should set up such an account at the same time they submit a Proprietary Research Proposal. A single account may be used to cover one or more proprietary proposals over an extended period of time. These accounts, like operating accounts, are established by the user's home institution via a purchase order. Information regarding those accounts can be obtained from the BNL Budget Office at x7957.

Procurement of Goods and Services. BNL uses a web-based procurement system. All procurement for goods and services is done by completing a web page and routing it using electronic mail. BNL's Financial Services Division (FSD) and the NSLS both support web pages to assist users in how to use the system. The FSD web page can be found at http://www.fsd.bnl.gov and the NSLS web page for information about procurement can be found at http://www.nsls.bnl.gov/BudgAdm/PurchaseInfo1.htm. The web pages describe how to obtain access to the system, what browsers are required, inputting instructions, Help Desk numbers, etc. To use the system, users must first obtain access to the procurement system. Access is obtained by completing a Systems Access form at http://www.fsd.bnl.gov. Click on FORMS, and then click on Request for BIS System Access. Forward completed forms and any questions to Pamela Cuifo at x4884.

Procurement of BNL Services. Intra-Laboratory Requests (ILRs) are used to request and charge work to your BNL account. There are different types of ILRs (yearly, for a specific job, or estimate only). ILRs can be opened and jobs scheduled by contacting the Building Manager Mike Kelly (x3476, kelly1@bnl.gov). The trades are all union-controlled although users can do incidental experimental work. Divisions of most interest to users are: Plant Engineering - plumbers, electricians, painters, carpenters, steam fitters, custodians, carpenters, and riggers; Central Shops - machining work and welding; Information Services Division - research library, photographer services, developing and printing of slides, prints, copying, overhead transparencies, designs, and drawings. Any questions pertaining to unions should be directed to the Building Manager.

1. Obtain blank ILR form from outside of Room 2-177.
2. Send completed forms to Data Entry at 725D (Rm 2-177). It will be entered and returned to you
3. Review the input and have original signed.

4. Forward signed copy to Donna Buckley at 725D. For questions about ILRs, contact the Building Manager Mike Kelly (x3476). NSLS Staff should contact Donna Buckley (x3599).

User Administration

User Administration is located in room 2-100. Office hours are Monday through Friday 8:00 a.m. to 5:00 p.m. General Information and Assistance: x7976. E-mail: nslsuser@bnl.gov. Fax: 631-344-7206. The User Administration Office handles all guest appointments, BNL Photo ID cards, Temporary Key Cards, and General User proposals, radiation dosimeters and NSLS Safety Orientation. It is also responsible for publishing the NSLS Newsletter, and Activity report, User Guide, and the main NSLS Home Page. The User Administration Office answers questions about NSLS or BNL procedures and directs users to the appropriate channels.

User and Staff Liaison from the NSLS Experimental Systems Group

Each General User group is assigned a member of the NSLS Experimental Systems Group staff, who will be available when the group arrives to assist them in getting the experiment started and running smoothly. The staff member will be science-specific where possible, to act as an additional resource in getting their experiment up and running smoothly. The Principal Investigator on the General User Proposal receives this information when notified of the beam time allocation.

Vacuum Services

The Vacuum Group offers limited repair service for Balzers turbo-molecular and mechanical pumps. The Vacuum Group also has pumps available for loan and offers leak checking services if required. Hourly rates and parts costs are charged to a user's account. Contact Walter DeBoer (x7168, pager 8204).

VUV Users' Meetings

See Weekly Meetings.

Waste Chemical Storage

The Hazardous Waste Collection Area is located in a small building outside the west roll-up doors (see map). All items must be identified according to BNL safety rules and appropriate waste disposal forms must be completed. See Section 6, Chemical Wastes, which describes the requirements for disposal more fully. Persons entering this area must maintain valid RCRA Hazardous Waste Generator training. For further details contact John Aloi (x7018, pager 5212).

Hazardous wastes which accumulate during an experiment should be stored in a Satellite Accumulation Area located near your beamline.

Weekly Meetings

There are a variety of weekly meetings for NSLS staff and users. These are posted regularly on the TV monitors (User Information Channel 22), along with any time or location changes.

Meetings for X-Ray and VUV Users. Experimenters and staff meet weekly to decide on any proposed short-term schedule changes, to make announcements, and to discuss issues of relevance to operations. It is recommended that each experimental group send at least one representative to the appropriate meeting. Minutes and proposed long-range schedules are e-mailed to interested users. Contact the Experimental Operations Manager, Steven Ehrlich (ehrlich@bnl.gov) to add your e-mail address to the list.

X-Ray Users, Wednesdays, 11:30am, Conference Room A
VUV Users, Thursdays, 11:30am, Conference Room A

Friday Lunch Seminars, 12:00 to 1:00 p.m., Seminar Room Anyone interested in learning about the exciting research being done at the NSLS is invited to the Friday lunch-time seminar. Two unannounced, informal, half-hour presentations are made weekly by experimenters. Attendees can

bring their own lunch or can place a sandwich order through the Chairman's Office (x2297) by 11:00 on Friday morning. Orders must be paid for upon delivery.

Wednesday Coffee for Users and Staff. Every Wednesday at 3:30 p.m. in the main Lobby, the NSLS hosts a coffee break as an opportunity for users to meet one another and NSLS staff members in a relaxed setting.

BNL Seminars, Colloquia, and Special Events. These events are published on a weekly calendar available at the NSLS mail stops.

Weld Shop

There is also a sheet metal shop (also see Sheet Metal Shop) which can do electron-beam welding. User accounts are debited for these services.

World Wide Web

The NSLS home page can be accessed through Brookhaven National Laboratory's entry, or at URL http://www.nsls.bnl.gov

X-Ray Users' Meeting

See Weekly Meetings.

Section 6
NSLS ESH Orientation

Protection of personnel and the environment is very important at the NSLS and at BNL. The following information is important for users to ensure that all visits to the NSLS are carried out in a safe manner. Please contact any member of the NSLS ES&H Staff if you have questions or need additional information.

A. Emergencies

1. Reporting Dangerous Conditions or Medical Emergencies

In the event of an emergency such as medical, fire, hazardous chemical spillage, or serious injury; dial x2222 or x911, or pull the nearest fire alarm box. In addition, always notify the NSLS Control Room, x2550. Leave the area if your safety is at risk. For the hearing impaired, you may report an emergency at x7032.

Note: Dialing 2222 or 911 from a BNL phone will reach BNL Fire, Rescue, Emergency, and Police personnel. It is not connected to the Suffolk County 911 system. If you wish to reach the Suffolk County 911 system, you must dial 9911.

2. Ringing of Fire Bells

The building fire alarm bells are an evacuation signal. If they sound - Stop work and immediately leave the building via the nearest safe exit. Once outside, walk around to the grass area near the main entrance of the building where you can help in an assessment of conditions within the building and assist in accounting for personnel. Do not re-enter the building until given permission.

3. Stop Work Authority

You will receive training which will permit you to issue a Stop Work Order. A Stop work order should be issued whenever you perceive that action is needed to mitigate imminent danger to personnel, equipment or the environment. Imminent danger exists when there is a hazard that could result in death, serious injury, environmental impairment or significant damage, and when immediate action is required. You also will be authorized to issue a stop work order to prevent violations of BNL Radiological requirements.

4. Laboratory Emergencies

The Laboratory has established a site siren system to provide warnings of a Lab-wide emergency. The site sirens are tested every Monday at noon. The Lab signals and your actions are as follows (building public address announcements will assist you):

STEADY SIREN - Proceed to the indoor Assembly point for the building that you are in (the Main Lobby if you are in the NSLS).

INTERMITTENT SIREN - Leave the Lab site immediately.

B. Access to the NSLS

1. Building and Experimental Floor

The NSLS building is unlocked from 8:00 a.m. until 6:00 p.m. on weekdays. Access during other hours is by encoded photo ID card or temporary key card. The experimental floor is locked at all times and is accessible *only* by encoded photo ID card or temporary key card. Everyone is responsible for maintaining building security. Do not let others use your card and do not open doors for unauthorized persons.

2. Controlled Areas

Controlled areas for radiological purposes are identified with colored magenta and yellow signs, indicating that access is permitted only to authorized persons. All users working in a Controlled Area at NSLS must have General Employee Radiological Training (GERT) and the NSLS ESH Orientation. An untrained visitor is allowed on the floor for a period up to 8 hours. Such personnel are not allowed to conduct work and must be continuously escorted by a trained individual. Instructions and record-keeping requirements for escorted personnel are provided at the main entrance doors to the experimental area. Minors under the age of 18 are not allowed into Controlled Areas unless they are explicitly authorized by the NSLS Chair.

3. BNL Photo ID Cards

Access to the experimental floor is gained by using your encoded Photo ID card. The ID card will be prepared for you when you register in the User Administration Office and will be ready for pick up after 4:15 p.m. on the same day.

The BNL Photo ID card issued to you is the property of the U.S. Department of Energy.

If you should lose your badge, report the loss immediately to BNL Police Headquarters (x2238). See the User Administration Office for assistance in obtaining a new ID card or if you have difficulty using your card.

Upon expiration of your appointment on the date indicated on your card, you must surrender your ID card to the User Administration Office. If you plan to return and extend your Laboratory appointment, you must turn in your expired ID card in order to receive a new one.

4. Temporary Key Cards

Temporary key cards are issued by the User Administration Office or the Control Room as a temporary means of gaining access to the experimental floor while a formal BNL Photo ID card is being prepared for you. Key cards are considered an important part of the NSLS security system and must be returned to the User Administration Office (or the Control Room) within 48 hours of issuance. Key cards are not a form of identification and must not be worn on clothing.

C. Training

1. NSLS ESH Orientation

The NSLS Environment, Safety and Health (ESH) Orientation is required to gain access to the experimental floor. This training addresses the material contained in this Section and includes other BNL required training. Each user must pass a written multiple-choice quiz and repeat this orientation every two years.

The ESH Orientation includes General Employee Radiation Training (GERT). Users who have received GERT at another DOE facility and can show the certification card are exempt from the GERT portion of the NSLS training.

The ESH Orientation is a condensation of required BNL training and is intended for short-term users only. Users who are present at the NSLS for more than 60 days in a one-year period must take the normal BNL training in addition to the facility specific training.

2. Beamline Operation and Safety Awareness (BLOSA) Training

The Principal Investigator or Spokesperson for an experiment is responsible for members of his/her research team. Each user must be trained on the beamline on which they will be conducting experiments. It is the responsibility of the cognizant beamline personnel and the experimenters to ensure that training is obtained. Approval to operate a beamline without beamline personnel present is the decision of the beamline representative.

3. RCRA Hazardous and/or Radioactive Waste Generator Training

This training is required for anyone disposing of hazardous and/or radioactive wastes at BNL. The Hazardous Waste Management course is available on the web at http://training.bnl.gov/cbt/hazwaste and the Radioactive Waste Management course is available on the web at http://training.bnl.gov/cbt/radwaste. The courses take approximately 20 minutes to complete. Training is valid for one year. Contact the ESH Facility Representative or any member of the NSLS ESH staff if you have questions.

4. Laser Training

Personnel using Class IIIb and IV lasers on the NSLS floor must receive BNL Laser Safety Awareness training. This training is available on the web at: http://training.bnl.gov/cbt/laser. Eye examinations are required prior to Class IIIb and IV laser use. Contact the ESH Facility Representative if you have any questions concerning training or eye examinations.

5. Crane, Forklift, and/or User Machine Shop Training

Special training is required to use cranes, forklifts and/or the user machine shop. It is recommended that no one work alone in the shop after hours. Open-toed sandals are not permitted and safety eye glasses must be worn at all times while in the shop. Crane information can be found in Section 5, under Cranes.

6. BNL General Employee Training (GET)

Users who are present at the NSLS for more than 60 days per year must complete BNL General Employee Training. Contact Training Coordinator Eva Rothman at x2295 for more information.

D. Experiment Safety

1. Experiment Safety Review and the Safety Approval Form

Review of proposed research prior to the start of operation is a cornerstone for the experimental safety program at NSLS. The safety review will consider the materials and practices planned by the user and ensure that the work can be conducted without impact to the work place and the environment.

Experiments are not authorized to receive beam unless the ESH review has been completed and all required controls are in place. This review process is initiated by the completion of the web-based Safety Approval Form (SAF). Safety Approval Forms are administered through the web and can accessed at http://130.199.76.52/safety.

The SAF for routine experiments must be submitted at least one week before the expected start date to allow time for adequate review. Researchers planning non-routine experiments should contact the

Experimental Review Coordinator, Andrew Ackerman, (x5431, pager 0338, ackerman@bnl.gov) early in the planning process.

When an experiment begins, the approved form will be posted at the beamline by an Operations Coordinator. The form must remain posted at the beamline for the duration of the experiment. All requirements that are established as a part of the experimental safety review must be adhered to during the course of the experiment.

2. Pink Cards for Unattended Beamlines

Beamlines which are enabled but unattended require a completed and posted pink card. Beamlines will be locked out by the Operations Coordinator (OpCo) if they are found enabled and unattended without a pink card in place. Cards can be obtained from the OpCo. They are completed by the User and posted adjacent to the shutter controls. The standard duration for a pink card is 24 hours. Some beamlines and some experiments are not approved for unattended operation.

3. Vacuum Procedures and Safety Checklists

Each beamline at the NSLS is unique and therefore has individual vacuum and safety requirements. These requirements are stated on beamline Vacuum Procedures and Safety Check Lists which are posted at each beamline. Checklists are utilized whenever a new experiment is started, a beamline is enabled, or vacuum work is required. An OpCo must be contacted to assist you in advance of such actions.

4. Red Tags for Lock-Out/Tag-Out

In some circumstances, a source of energy (such as electricity, high pressure, or radiation) must be turned off or disabled to avoid hazard to personnel. BNL has adopted a "Lock-Out/Tag-Out" procedure for these situations. The tags are red, have the words "Danger-Hold," written on them, the name of the person who attached the tag, and the reason. Tagged equipment may not be operated and the tag may not be removed, except by the authorized person who attached it. Penalties for violation are severe and may include dismissal from BNL. Further information about red tags can be obtained from the NSLS Safety Officer (x7196) or an Operations Coordinator.

5. Yellow Tags for Equipment Conditions and Requirements

Yellow tags are used to protect equipment and provide information about important conditions, such as vacuum requirements, and are placed where the information is needed. Further information about yellow tags can be obtained from the OpCo.

E. Radiation Safety

1. Introduction

When conducting work at NSLS, it is important that radiological requirements be properly addressed. BNL regulations are subject to Federal enforcement under the Price Anderson Act. The Laboratory is subject to fines and penalties, and individuals responsible for violations are subject to disciplinary actions. Contact a member of the NSLS ESH Staff for information or help.

2. Radiation Exposure

Radiation exposure to most personnel working on the NSLS floor is very low and typically not measurable on the BNL radiation dosimeter.

Ionizing radiation surveys can be requested by contacting an OpCo. Most areas of the experimental floors have very low radiation levels. Some exceptions are as follows:

- During injection into the VUV ring, radiation levels of 5 to 20 mrem/hr are produced at VUV beamline front ends, U4IR platform, and the transport line.

- During prolonged injection into the X-Ray Ring, and during some study periods such as machine start up, posted radiation areas may be established in some locations for short periods of time.

- In order to maintain your radiation exposures as low as reasonably achievable (ALARA) and to be compliant with BNL radiological requirements, always adhere to radiological postings and any instructions that are announced by NSLS Operations personnel.

- Area radiation monitor ("Chipmunks") with alarm capability are placed in locations around Buildings 725, 729 and 820 where it is deemed advisable to monitor short and long term radiation trends and patterns. This includes areas around the NSLS Linac, booster ring, VUV and X-ray rings, beamline front ends, certain second floor offices, and the ATF Experimental Hall, gun hutch and laser rooms. The output of the Chipmunks currently in place is accumulated in history files and analyzed as needed. Their alarms are also used to warn people in their vicinity that radiation levels are elevated.

  Under normal conditions, Chipmunks will give off occasional chirps and show a green light under background radiation conditions. If the rate of chirps increases and you see that either the yellow or red light is illuminated, the following actions should be taken:

  1. **Move away** from the vicinity of the Chipmunk and the probable source of radiation.

  2. **Telephone the Control Room** (NSLS X2550; ATF X2306) and inform the staff that a Chipmunk in your area is giving off an alarm. Specify the exact location of that Chipmunk and, if you can see it from you location, indicate the level of the alarm (yellow or red).

3. Beam line Radiation Safety

The radiation intensity in a photon beam line at the NSLS is extremely high. Any exposure to the beam would result in instant serious injury to the portion of the body exposed. Therefore, personnel access to the beam is strictly forbidden and controlled. Where appropriate, beam pipe flanges are secured with padlocks that can only be opened with keys that are part of the interlock system to protect against inadvertent access to the synchrotron beam. Users should never move lead or concrete shield blocks or components of a beam line without NSLS approval.

4. Interlock Rules

The hutches enclosing the experiments have personnel interlocks to allow access to the equipment and samples, and yet prevent exposure to the synchrotron radiation. Once an experiment is enabled, the user can independently operate these interlock systems. The personnel safety of beam line users at the NSLS depends on adherence to the operational procedures for accessing the hutches and on the integrity of the personnel interlock systems. Modifications and maintenance work on these systems is rigidly controlled by the NSLS. A "Safety System Work Permit" (available in the Control Room) must be approved by the Safety Officer and posted at the work location for work on photon shutters, hutch door locks and switches, shielding, and other elements of the safety systems.

Bypassing any interlock system is prohibited. Actions such as bypassing door switches, defeating Kirk locks, or deliberately leaving someone inside an interlocked hutch are serious infractions and may lead to loss of research privileges at the NSLS.

5. Radioactive Material

Radioactive materials or sources used at the NSLS must be utilized in conformance with the BNL Radiological Control Manual. All such material must be labeled and controlled as specified in the Manual (e.g., a trained Source Custodian must be identified). Operating procedures and radiation work permits may also be required. Please identify all radioactive sources or materials on the Safety Approval Form.

Shipment of radioactive material to or from the NSLS must be done by the Isotope & Special Materials Group. Contact IS&M at (631) 344-5233.

6. Obtaining a Radiation Badge

Personnel can obtain a radiation badge from the User Administration Office weekdays between 8:00 a.m. and 5:00 p.m. or from the Control Room at any other time. Badges will not be issued to those who have not completed the NSLS ESH Orientation. Users with expired training must update their training before a radiation badge will be issued.

Short-term users (those who are present at BNL for less than 60 days per year) will be issued temporary radiation badges on a month to month basis. Temporary radiation badges are labeled "Visitor." Write your name in pen on the label.

Users who are at the NSLS for more than 60 days (consecutively) per year should request a permanent radiation badge from the ESH Facility Representative. If you are issued a permanent radiation badge, your name will appear on the label.

7. Wearing and Storing Your Radiation Badge

All personnel are required to wear a radiation badge while on the experimental floor. The radiation badge must be worn on the outside of clothing, color bar facing out, and be placed between the neck and waist. The preferred location is on or near the center of the chest.

Badge boards are located by most exits on the experimental floor. When you go outside the NSLS building, leave your radiation badge on the "Temp" section of any badge board. If you have a permanent radiation badge, always place it in the numbered slot you have been assigned on the appropriate badge board.

Every radiation badge located on a badge board has been assigned to a user or BNL staff member, including those labeled "visitor." Wear only the radiation badge assigned to *you*. Do not remove a radiation badge from the badge board unless it has been assigned to you.

8. Returning Your Radiation Badge

It is important that you turn in your radiation badge at the end of your visit so that your dosage, if any, can be determined. When leaving Brookhaven at the end of your visit, leave the radiation badge in one of the designated containers on any radiation badge board. If you forget to leave your radiation badge, you must mail it to the User Administration Office as soon as possible.

9. Exchanging Your Radiation Badge

Radiation badges are exchanged monthly, usually within the first few days of each month. If you have a permanent radiation badge, you will find your new badge in the assigned slot of your badge board at exchange time. If you have a temporary radiation badge, your old one will be removed from the badge board. You must sign out a new badge from User Administration during normal working hours or from the Control Room at any other time.

10. Lost or Damaged Radiation Badges

Lost or damaged radiation badges must be reported to the NSLS ESH Facility Representative (Chris Weilandics, x2593). A replacement badge can then be obtained from User Administration or the Control Room.

F. Hazardous Materials

1. Introduction

Hazardous materials are reviewed as part of the experiment safety review. Depending on the type of material used, there may be special safety and emergency procedures required. Materials considered potentially hazardous are:

a. flammable substances
b. toxic substances
c. radioactive materials
d. biological hazards
e. cryogenic liquids
f. corrosives

It is important that the Safety Approval Form identify all hazardous materials that will be used.

2. Usage

There are several support laboratories available for sample preparation or the conduct of other activities that need exhaust hoods and other controls. Wet chemistry procedures should be conducted in the support laboratories and are discouraged at the beamlines. Use of these labs must be scheduled with the lab stewards. Hazardous procedures must be reviewed by the NSLS ESH Staff.

It is best to bring the smallest quantity of material necessary for the experiment to the NSLS. Use of hazardous materials in small quantities helps to limit the potential of a "worst-case accident" and often simplifies required safety measures. Hazardous gases are a particular concern. Only limited quantities of these gases can be brought onto the experimental floor. For some gases, even lecture bottles may be an unacceptable volume.

All users involved in an experiment must be knowledgeable of any controls required by the NSLS, and must be capable of implementing any special procedures in the event of an accident. Most experiments involve limited quantities of hazardous materials which can be readily accommodated. Contact the NSLS Industrial Hygienist (x5431) with ANY questions regarding use of hazardous materials.

Beryllium. The DOE has established detailed rules governing the use of beryllium. Most beryllium work at the NSLS involves use of beryllium articles that present little risk of inhalation as long as the articles are not broken and no beryllium oxide is allowed to form. If your work involves use of a beryllium enclosure, window, heat shield, or other article or any other beryllium containing substance please report beryllium use on your experimental Safety Approval Form. Broken or oxidized articles must be carefully handled and disposed as hazardous waste. Contact an OP CO for assistance. More information about beryllium is available at the BNL Standards Based Management System (SBMS) web site: https://sbms.bnl.gov/standard/12/1200t011.htm.

3. Storage

The NSLS has a few cabinets available for short-term storage of flammable and corrosive liquids, but space is limited. The laboratory exhaust hoods are not an appropriate place to store hazardous materials. Because storage is limited, users are expected to ship their materials back to their home institution upon completion of their experiment (see Hazardous Materials Shipping Section below). The NSLS has limited outdoor storage facilities for toxic, reactive, and flammable gases. Storage of these gases within the NSLS buildings is unacceptable without special precautions.

4. Spills

Spills of chemicals or chemical wastes must be immediately addressed to prevent injury to personnel or releases to the environment. The release of chemicals into a sink or floor drain in even small quantities could result in violations of BNL's discharge or waste disposal permits and could lead to large fines and costly remediation. Report any spills to the Operations Coordinators and the NSLS ESH Staff immediately to determine the appropriate response. Call the BNL emergency numbers x2222 or x911 if the spill will be released to the environment.

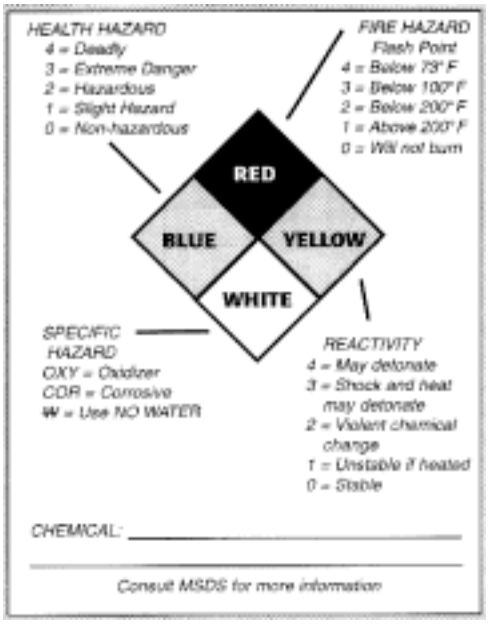
In addition, remember that the NSLS air handling system circulates air throughout the building. Keep the Control Room (x 2550) advised of any activities that produce a noticeable odor.

5. BNL Chemical Management System

On your experiment Safety Approval Form, you must list all the materials you will be using. NSLS ESH Staff will determine which of these materials, if any, must be bar-coded according to BNL policies. To obtain a bar-code for your material, contact BNL Chemical Management at x2028 or x4935.

6. Labeling

DOE requires that all materials in use at the NSLS be properly labeled. Use of a standard labeling system is required throughout BNL. The labels display a colored diamond divided into four sections and have a space for the name of the material in the container. See sample below:



HOW TO COMPLETE A LABEL

The diamond's color coding is as follows:

blue	=	health
red	=	fire
yellow	=	reactivity
white	=	other specific hazards

Numbers are placed in each section to convey the level of the hazard. A numbering system from 0 to 4 is used, with 0 designating the least hazard and 4 designating the most hazard. The item's MSDS (Material Safety Data Sheet) will tell you exactly what numbers and codes to use for the substance.

The owner of the hazardous substance is expected to complete and affix these labels to their containers. Labels are available in the NSLS Stock Room. Assistance in determining the numbers and codes to be used is available from beamline personnel, the NSLS ESH Staff or on the product's Material Safety Data Sheet (MSDS). A complete label must include:

a. the appropriate number or code in each of the four sections of the diamond,
b. the name of the product,
c. the name and beamline affiliation of the product's owner, and
d. the date that the label was placed on the container.

The BNL MSDS Database can be found at the following website:
http://www.esh.bnl.gov/cms/msds_query.htm

7. Shipping

Hazardous materials to be shipped offsite must be packaged and handled in accordance with U.S. Department of Transportation (DOT) regulations. The DOT definition of hazardous material is similar to that described below under the heading of Hazardous Waste.

All hazardous material shipments are handled by BNL Shipping. They require that you identify your materials on a shipping memo (available in the lobby or office 2-177) and that you attach the appropriate Material Safety Data Sheet (MSDS) to that memo. You are expected to place your materials in a suitable container and bring that container to the NSLS stockroom with the completed shipping memo. BNL shipping will open your container, repack your materials, affix the proper DOT labels to the package and ship your materials to the address you specify. If you have questions, ask someone on the NSLS ESH Staff.

G. Chemical Wastes

1. Introduction

The generation of hazardous or radioactive waste at NSLS is subject to specific controls. Personnel participating in an experiment which generates RCRA hazardous wastes must review this material before the beam line is enabled. In addition, at least one researcher must be designated to accept responsibility for ensuring compliance with BNL waste regulations and completing BNL Hazardous Waste Generator Training.

2. Operational Controls

Chemical wastes are to be stored near their point of generation in a designated Satellite Accumulation Area (SAA) until ready for transfer to the NSLS 90-day Storage Area. The SAA's are located and posted in the setup laboratories; each has an assigned manager. You must put your waste containers in one of the SAA's as the wastes are accumulated. Chemical wastes stored in a Satellite Accumulation Area must meet the following requirements:

- Waste containers must be closed at all times except when making additions.
- Containers must be labeled to identify the contents as waste (labels are available in the 90-day Storage Area).
- The container must be kept in one of the SAA secondary containment trays and kept away from sinks or drains.
- Incompatible materials may not be stored in the same tray.
- Decisions about mixing RCRA wastes must be made in consultation with the NSLS Safety Engineer.

The RCRA trained person for your experiment must transfer wastes to the NSLS 90-Day Storage area at the end of the experiment. Information regarding waste classification and disposal techniques is available at http://www.nsls.bnl.gov/Safety/Waste/wastemain.htm. Consult with your beam line local contact, an Operations Coordinator or someone from the ESH staff if you have questions.

3. Your Role and Responsibility

As a user involved in an experiment generating hazardous wastes, it is important that you follow the procedures and other instructions established by NSLS and take prompt action in the event of spills. Be attentive to the information available through postings, email, and on the web and seek help when needed.

4. Potential Regulatory and Environmental Impacts

Work involving generation of hazardous chemical wastes must comply with Federal requirements established by the U.S. Environmental Protection Agency, and is subject to enforcement action by the EPA and New York State Department of Environmental Conservation. The inadvertent or unauthorized release of chemicals into a sink or floor drain, even in small quantities (< 100 ml), could result in violations of BNL's discharge permits and can lead to large fines and costly remediation.

5. Pollution Prevention and Waste Minimization

Disposal of hazardous wastes is costly and time consuming. Please make every effort to minimize the quantity of chemicals you bring to the NSLS and the quantity of waste materials generated.

H. Computer Security

DOE, BNL, and NSLS directives require that every user of computer equipment at this facility comply with good business practices. These include the following:

1. **Preventing Unwanted Access**: Passwords should be at least six characters in length and not something easily guessed by associates or outsiders. Do not use your first name, the name of your spouse or children, etc. Also avoid dictionary words. The best password can be formed by taking the first character from the first several words in a familiar phrase, lyric, or poem, or by substituting some numbers for some letters in a word.

   Remember:

   - don't share your password with others
   - do change your password periodically
   - avoid including your password in command file
   - don't write down your password and leave it lying around
     (If you must write it down, place it in a sealed envelope marked "private" and keep the envelope in a locked desk drawer)
   - log off or use the Unix "lock" command if on the HP system when leaving your PC or terminal.

2. **Unix-Type Operating Systems**: All Unix-type operating systems are required to run the TCP Wrapper program. Network access and services should be restricted as much as possible. For information on obtaining the TCP Wrapper program contact Herb Langenbach (x5330) or John Smith (x4734).

   System login banners and/or the Unix system MOTD should not use the word "Welcome." Instead they should display the mandated Department of Energy banner which can be found at http://nt.bnl.gov/banner/NT_banner.htm. The wording can easily be modified for use by non-BNL institutions.

3. **Controlling Access and Protecting Equipment**: All PCs and terminals should be locked up during non-business hours. If this is not possible, inexpensive power locks and theft prevention devices should be installed. Password protected screens savers should be used to control access to equipment unattended for short periods of time.

4. **Protecting Programs and Data**: PC users should ensure that both the programs and the data they use are backed up periodically. Backup media should be kept in a locked file cabinet or desk drawer if no other options are available. Ideally, back-up facilities should be in a remote location with a controlled environment and a fire-rated storage device.

5. **Illegal Software and Computer Use**: It is DOE, BNL, and NSLS policy that users of commercial software have a valid licensed copy. The use of facility-owned computers for games or outside business is illegal. The use of BNL networks and routers for activities that would be defined as misuse or abuse is prohibited. Examples would include the use of the network for personal business, games, or accessing sites that could cause embarrassment to BNL.

6. **Worms, Viruses, and Other Threats**: Do not use software unless you are certain that the source is above suspicion. This includes software obtained in the mail or from a public bulletin board. Experimenters are responsible for having their own anti-virus software. Any evidence of hacker intrusion, virus attack, etc. must be reported to the NSLS Computer Security Representative, Herb Langenbach, at x5330.

7. **System Administration**: Computer Incident Advisory Capabilities (CIAC) bulletins are posted on the bulletin board located in the NSLS lobby and outside the computer room on the second floor (Room 2-101). The HP Unix system message-of-the-day contains information about currently posted advisories. System managers should ensure that the User Administration Office has current telephone numbers and email addresses so that responsible people can be rapidly contacted in case of hardware, network, or security problems.

I. Recycling of Non-Hazardous Wastes

Paper: All paper except newspaper should be saved in designated receptacles (white paper and mixed paper) at each beamline.

Styrofoam Peanuts: Place styrofoam shipping peanuts into specially marked containers outside the Stockroom.

Cardboard: Break down cardboard boxes. Place them in marked dumpsters outside the East roll-up doors.

Lead: Place lead scraps, sheet, and bricks on the specially marked cart located outside the Stockroom.

Soda Cans/Bottles: NY State has a nickel deposit law for carbonated beverages. Put cans and bottles in marked containers by soda machines. The recycling committee donates proceeds to children's charities.

Other Glass & Plastic: Place glass and plastic food containers (recycling symbols 1 and 2) into yellow recycling containers in kitchen areas and outside the east roll-up door.

Batteries: See Hazardous Waste Section, under Batteries.

Laser Printer Cartridges: Bring used cartridges, with accessories and packing material, to the stockroom.

Scrap Metals: Place all metals in the galvanized metals recycling bins located at many beamlines. Normal recycling pickups are on Wednesdays. If the metal plates, sheets, etc. are large enough to be used for

machining other projects, then they may be left on pallets of usable material in the User Machine Shop. Call x4926 with any questions about recycling metals.

J. Property Damage

Users shall take reasonable precautions, in accordance with sound practices, to safeguard and protect the NSLS, its beamlines, and related equipment. In the event of any loss, destruction of, or damage to any such property, the User shall inform the beamline spokesperson or local contact of the facts surrounding such occurrence. In the event the occurrence involved non-government-owned property, the owner of such property shall also be notified. After such an event, the parties involved shall enter into good faith discussions to resolve issues arising from such occurrence, including financial responsibility for the incident. In the event such discussions fail to resolve all issues, the parties may rely upon their legal remedies.

Section 7
Visitor Amenities

Airports

Long Island is serviced by three airports: John F. Kennedy, LaGuardia, and Long Island MacArthur (Islip). Airline toll-free numbers can be obtained by calling the toll-free operator at 800-555-1212. There is no public transportation from these airports to the Laboratory. Limousine services are available from all three airports:

Banking

An ATM (Automatic Teller Machine) is located inside the door of Berkner Hall.

Teachers Federal Credit Union (TFCU) has a branch office on-site that offers all the regular banking services (x2790). TFCU will cash all BNL checks.

If you need to cash a personal check but do not hold an account with TFCU, checks of up to $200 can be cashed at the BNL Cashier with a valid BNL Photo ID Card (Bldg. 134J, x2474). Call for hours of operation.

Bus/Onsite Shuttle Service

An onsite shuttle service is available Monday through Friday, 8:00 a.m. through 5:00 p.m. to take guests, users and employees to other onsite locations. Call X2714 for a pickup. The BNL Shuttle website can be found at: http://www.bnl.gov/bnlweb/shuttle.html.

Car Rentals

Cars can be rented from any of the three airports. Below are some toll free numbers:

Hertz	1-800-654-3131
Avis	1-800-831-2847
Budget	1-800-527-0700
Enterprise	631-585-2121 (at Islip airport)

Enterprise Car Rental in nearby Patchogue (631-447-5900) can pick you up and bring you to their agency. Enterprise also offers a discount upon presentation of a BNL ID card.

Ferries

There are ferry services to and from Long Island year round. Reservations are recommended. The Bridgeport and Port Jefferson Ferry (631-473-0286) runs between Port Jefferson, NY and Bridgeport, CT and the Cross Sound Ferry (631-323-2525) runs between Orient Point, NY and New London, CT.

Food and Drink

User Lounges on the experimental floor:

- Green-Chasman Library (Room 1-111, near Stockroom) with chairs, copier, fax, and pc
- G. Hummer Memorial Lounge (Room 1-109, opposite U4) has a sink and microwave
- Conference Room C is located in room 1-165 opposite the X8 beam port
- X-Ray Lounge (Room 1-129 near beam port X20) with sink, refrigerator, microwave, coffee

Vending Machines with food and beverages are located:

- by the Building Manager's Office (Room 1-179)
- across form the X-Ray Lounge (Room 1-129)

No alcoholic beverages permitted on the NSLS experimental floor at any time.

On-Site Restaurants (hours may change; call to confirm hours of operation)

- *BNL Cafeteria* in Berkner Hall (x3541) is open Monday through Friday from 7:00 a.m. to 2:30 p.m. (limited service after 1:30 p.m.). The cafeteria is also open Saturdays, Sundays and Holidays from 7:30 a.m. to 2:00 p.m.

- *Brookhaven Center* (x2204) serves dinner, beverages, and snacks. The center is open Monday through Friday from 5:00 p.m. to 10:00 p.m. for dinner (bar open until 11:00 p.m.) and Sundays with a limited menu from 5:00 p.m. to 9:00 p.m.

Off-Site Restaurants. A Guide to local eating establishments (restaurants, grocery stores and drug stores) is available from the User Administration Office.

Gas Station

A service station is located on site (x4034; see map). There are also several service stations not far from the laboratory on Route 25 west of the William Floyd Parkway. Maps of the local area are available in the User Administration Office.

Laundry Facilities

Coin-operated laundry facilities are located in the Apartment Area, across from the Child Development Center.

Recreation

At the Laboratory. The recreation facilities at the Laboratory include the swimming pool and gymnasium plus weight room, the recreation building, tennis courts, archery range, softball fields, and a parcourse. Specific announcements on activities and special events are carried in the weekly Brookhaven Bulletin, and on various bulletin boards. BERA (the Brookhaven Employees Recreation Association) oversees the more than forty organized sports and cultural activities. A pamphlet describing these activities is available from the Recreation Office (x2873) in BNL Human Resources.

On Long Island. There is a great variety of things to see and do on Long Island, including Montauk Point, Port Jefferson, the Hamptons, historical sites and landmarks, museums, parks and beaches, sporting facilities, arts and theaters, and wineries. Some sources of information: the Long Island Info Home Page is www.webscope.com/li/info.html. Community Pages in the Suffolk County Telephone book lists many museums, historical sites, mansions, botanical gardens, arboretae, and farms; also shows public parks and beaches. Long Island Convention and Visitors Bureau at 516-794-4222 Long Island Newsday, www.newsday.com The Friday Weekend Section lists upcoming art shows, music, theater, arts and crafts shows, festivals, and other special events as well as movie listings. The Newsday and other papers are available in the Berkner Hall cafeteria. Brookhaven Lab's Tour Program Office offers tours of BNL during the summer months. Further information can be obtained by calling x4495. See also www.bnl.gov. Long Island Wine Council (631-475-5492) has information about the local wineries.

New York City. New York City has many places of interest, including the Empire State Building, Statue of Liberty, Circle Line Cruise of Manhattan, Lincoln Center, Rockefeller Center, Radio City Music Hall, Broadway Theaters, Ellis Island, World Trade Center, New York Stock Exchange, South Street Seaport, United Nations, and numerous museums (such as the Museum of Natural History, Metropolitan Museum of Art, Museum of Modern Art, Intrepid Air and Space Museum). World renowned musicians can be heard almost any night of the week in New York's many nightclubs and concert halls. Getting there: The Ronkonkoma train line of the Long Island Rail Road (LIRR) takes 1 hour and 20 minutes to get to Penn Station. Call 631-231-5477 for detailed fares and schedules, or go to their website at: www.mta.nyc.ny.us/lirr/html/aboutlir.html.

Shopping

The Brookhaven Employees Recreation Association (BERA) Office in Berkner Hall (x3347) is open Monday through Friday from 9:00 a.m. to 1:30 p.m. It offers a film developing service and stocks greeting cards, BNL sweatshirts, T-shirts, and mugs, and periodically distributes tickets for public sports and cultural events (e.g., New York City theater and opera, United Artists movie tickets). There are no other stores or shops on-site. The nearest off-site stores are shown on a map available at the User Administration Office.

Taxi Services

Winston/American Limo, (631) 924-1200
Classic Transportation Group, (631) 567-5100

The rates charged by the limousine companies vary. It is advisable to request the rate in advance and if it seems unusually high, confirm it with another service. Reservations are required.

Train Shuttle Service

BNL offers a shuttle service to and from Ronkonkoma Train Station. Contact BNL's Transportation Office at X2535.

Trains

The Long Island Rail Road (LIRR) has service from Penn Station in New York City to a number of stations near the Laboratory. Maps and schedules are available at the stations, by calling LIRR at 631-231-5477, or at www.mta.nyc.ny.us/lirr/html/aboutlir.html.

Travel Services

For personal travel services, there is a travel office located in Berkner Hall near the cafeteria (Omega World Travel at x5918, x5958, or 1-800-876-6342).

The BNL Travel Office services are not available for personal (i.e., non-official) travel. Official travel reservations may be made by calling x2531 or visiting the Travel Office, Bldg. 179. The Travel Office will quote schedules for the choice of the traveler and will call the carrier to make the reservations. Confirmation will be made to the traveler as soon as possible. Air and rail tickets, other than for the Long Island Railroad, must be picked up at the Travel Office upon payment by check, money order, or a charge against a user account. When tickets are delivered to the traveler, an itemized breakdown of the transportation costs is included.

Section 8
Check-Out Procedures

Below is a checklist you should review at the end of your experimental run, before leaving BNL. Taking care of these items before leave so that you will not have to be contacted to take care of them later.

Chemicals & Hazardous Materials

- ☐ Verify that all chemicals have been controlled as required.
- ☐ Check your experiment's Safety Approval Form for notations by the Experimental Review Coordinator.
- ☐ Refer to Section 6, under Hazardous Materials and Section 6, under Chemical Wastes of this Guide and request any necessary assistance from the NSLS ESH Personnel.
- ☐ Remove any chemicals you own from the NSLS, or label and store all containers properly.
- ☐ Take any hazardous wastes to the Hazardous Waste Collection Area and complete any required paperwork.

Lab Space

- ☐ Check that all assigned lab space is clean and safe.

Experiment Close Out

- ☐ Notify an OP CO to close out your experiment. He/she will remove and file your Safety Approval Form.
- ☐ Complete the Experiment Close-Out Form which is attached to the Safety Approval Form posted at the beamline. An OP CO will remove and file the Experiment Close-Out Form.
- ☐ Complete an End-Of-Run Summary Form. Your input, both positive comments and constructive criticism, lets us know whether the support provided by NSLS and Beamline Staff was timely and useful. This form can now be found online at: http://nslsweb.nsls.bnl.gov/nsls/dbforms/end-of-run.asp.

Return BNL Property

- ☐ Return Radiation Badge. Place your badge into one of the "Returned Badge" containers located at each badge board. If you have a permanent radiation badge, place it into its numbered slot.
- ☐ Return any Temporary Key Cards to the Control Room or to User Administration. If you leave before receiving your official BNL Photo ID Card, User Administration will hold it for you until your next visit.
- ☐ Return BNL property (library books, housing keys etc.) to appropriate locations. If unable to do so due to time constraints, these items can be left with User Administration (or the drop-box outside the door).
- ☐ Any equipment or property to be taken offsite falls into one of two categories: (a) Property owned by you or your institution and (b) BNL-owned property. Property owned by you or your institution must be properly labeled and tagged while onsite and at the time of removal to an offsite location. Blank tags can be obtained from the Stock Room. If the property is owned by BNL, you must have a property pass to take it offsite or it must be properly transferred out of your name prior to leaving BNL. Please see Pam Ciufo (X4884) to handle any paperwork for all BNL property and equipment.

Close-Out Accounts

- ☐ Notify Herb Langenbach, X5330, langenba@bnl.gov to disable nodes, IP Addresses, and accounts on NSLS Computers if you are leaving BNL and will not be using your account so they may be inactivated.
- ☐ Cancel email addresses.

Contact Numbers

All telephone, fax and pager numbers below can be reached from BNL onsite phones using the 4-digit numbers listed. To call from an offsite phone, dial 631-344-xxxx. See Section 5, under Pagers, for information to call BNL pager numbers.

ADMINISTRATION					
Position/Staff Member	Ext.	Page	Fax	Bldg.	Rm.
Chairman Michael Hart	5939	2297	5842	725B	2-127
Deputy Chairman Samuel Krinsky	4740	2145		725B	
Assoc. Chairman Bob Casey	4654			725C	
Asst. to Chair/Admin. Frank Terrano	3963			725B	
User Administration	7976		7206	725B	2-100
BUILDING					
Position/Staff Member	Ext.	Page	Fax	Bldg.	Rm.
Building Mgr Mike Kelly	3476	5350		725A	
Asst. Building Mgr. G. VanDerLaske	4926	8222		725D	
MACHINE OPERATIONS					
Position/Staff Member	Ext.	Page	Fax	Bldg.	Rm.
Control Room	2550			725A	
Interlocks OP COs John Gallagher	5046 5770	5824 0875		725A 725A	
Machine Status	5700				
Oper. Coord (OP COs)	5046	5824		725A	
VUV Ring Manager Steve Kramer	4925			725C	
X-Ray Ring Manager Jeff Rothman	4914			725B	
SAFETY STAFF					
Position/Staff Member	Ext.	Page	Fax	Bldg.	Rm.
ESH Coordinator Nicholas Gmür	2490	5324		725D	
ESH Facility Rep. Chris Weilandics	2593	6208		535A	
Experimental Review Andrew Ackerman	5431	0338		725D	
Industrial Hygienist Andrew Ackerman	5431	0338		725A	
Safety Engineer John Aloi	7018	5212		725A	
Safety Approval Andrew Ackerman	5431	0338		725D	
Safety Officer Tom Dickinson	7916	5306		725D	
Offsite Telephone Information				**555-1212**	
BNL Fire/Rescue/Emergency				**2222 or 911**	

USER SUPPORT & SERVICES					
Service/Staff Member	Ext.	Page	Fax	Bldg.	Rm.
Beamlines Tony Lenhard Gary Nintzel	3657 3751	0825 8202		725D 725D	
Computer Systems Eric Blum	2438			725C	
Computer Security Herb Langenbach	5330			725B	
Expmtl. Ops. Manager Steve Ehrlich	7862			725D	
Expmtl. Equip. Pool Syed Khalid OP COs (returns)	7496 5046	 5824		725D 725A	
Fax Machines Mail Station 725B Mail Station 725C Mail Station 725D Bldg. 820, ATF Bldg. 510E, 3rd Floor			4745 3029 3238 3115 5239	725B 725C 725D 820 510E	2-109 2-150 2-180
Gas Cylinders/LN_2	2118				
Hazardous Waste Storage or Disposal John Aloi	7018	5212		725A	
Intercom - Bldg. 725	7878				
Lab & Set-Up Space Mike Kelly	3476	5350		725A	
Machine Shop/Users Shop Gerry VanDerLaske Tony Lenhard	4277 4926 3657	 8222 0825		 725D 725D	
Quality Assurance Michael Buckley	8097			725D	
Shipping/Receiving	2118				
Shipping Chemicals John Aloi OP COs	7018 5046	5212 5824		725A 725A	
Short Term Storage Mike Kelly	3476	5350		725A	
Stock Room	2118				
Training Coord. Eva Rothman	2295			725D	
Vacuum Walter DeBoer	7168	8204		725A	
OTHER BNL OFFICES					
Office	Ext.	Page	Fax	Bldg.	Rm.
Police Headquarters	2238			50	
Housing	2541			179B	
Travel Office	2531			179B	
User Accounts	7957			460	

Radiation (TLD) Badges

TLD badges can be obtained Monday through Friday at NSLS User Administration, 8:00 a.m. to 5:00 p.m., on the 2nd floor, Room 2-100. At all other times, TLD badges can be obtained from the Control Room. Contact an OP CO on Pager 5824.

Operations Coordinator (OP CO)

OP COs are available 24 hours a day, 7 days a week for:

- **Safety Approval Forms**
- **Radiation (TLD) badges on evenings, weekends, holidays**
- **Inspecting and unlocking beamlines**
- **Questions about interlocks, shielding, vacuum**
- **Experimental Equipment Pool (for returns only)**
- **Closing out experiments and locking beamlines**
- **Information about labeling, storing, disposing, and shipping chemicals**
- **Any safety questions or issues**

OP COs can be contacted by:

- **By phone at x5046**
- **By pager. Instructions to page an OP CO:**
  Dial 3456
  Wait for tone
  Dial 5824
  Wait for a long tone
  Dial YOUR telephone number
  Hang up and wait there for an OP CO to call you back.

Emergency Telephone Numbers

Fire/Medical	Control Room	BNL Security
x2222 or x911	x2550	x2238